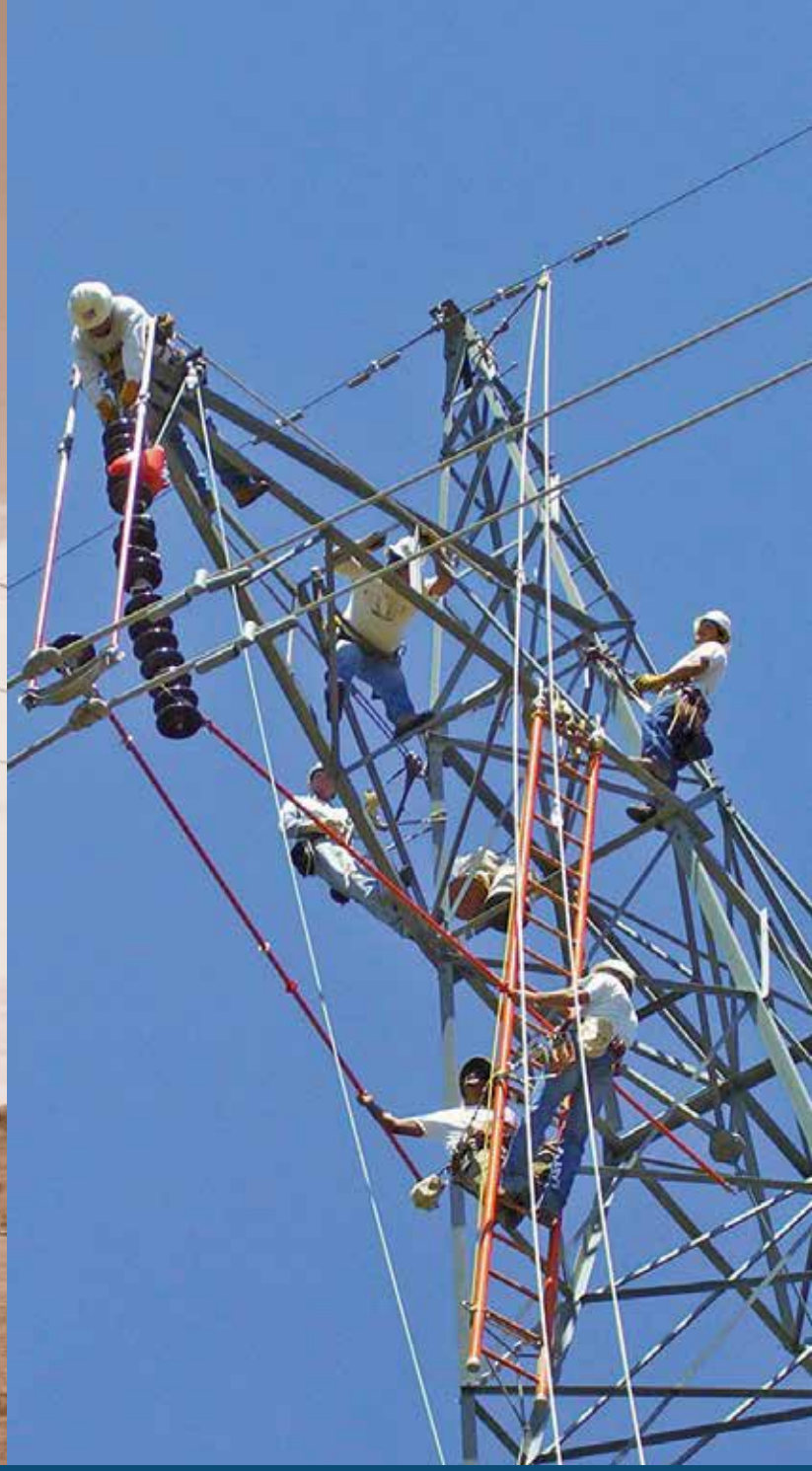

LOOKING BACK *and* LOOKING AHEAD

Perspectives on 30 years of change at Western

WESTERN AREA **POWER** ADMINISTRATION

This book is dedicated to current and former employees, as well as customers, who have ensured Western's future success.

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Perspectives on 30 years of change at Western Area Power Administration

Introduction

In 30 years, Western Area Power Administration has experienced growing pains, marked milestones, overcome innumerable challenges and celebrated countless achievements. Together we've conquered industry restructuring challenges, toiled through Transformation and mourned the loss of our co-workers who paved the way before us or worked alongside us. Since Western's beginning on Dec. 21, 1977, our employees' experiences have changed and shaped Western into the agency we see today. As you read their stories, you will see how they laid the foundation for Western's next 30 years.

For example, read how the uncertainty of Western's new responsibilities in 1977 almost led to an international incident between Mexico and the U.S. Energy and State departments, as related by John DiNucci, from the Office of Power Marketing Coordination in Washington, D.C. Hear how Western staff and customers fought for the agency's existence during privatization hearings in the 1980s and 1990s and then read how high-profile projects like COTP and Path 15 helped Western gain respect in the electric utility industry.

This volume gives voice to a variety of employees who have lived and worked through those changes directly. Listen and share in the memories of current and former employees as they reminisce about the:

- difficulties of establishing a new agency;
- excitement over building a construction program and the uncertainty of privatization efforts in the early 1980s and '90s;
- devastation of our tragic plane crash in 1992;
- tumultuous years of electric industry restructuring, functional separation, the California energy crises and blackouts in the 1990s and beyond;
- successes of Path 15 and other major upgrades; and
- renewed focus on wind and other types of renewable energy.

Join in the journey through the last 30 years. These stories—from interviews, e-mails, audio tapes and *Closed Circuit* articles—reflect a cross-section of programs or issues that involved employees around Western or that were defining moments in our past. While we've captured more than 100 current and former employees' memories here, we'd love to hear your tales as well. Send us your memories at **CorpComm@wapa.gov**.

We are grateful to everyone who shared their experiences with us.

1970s

WESTERN'S BEGINNINGS

Many stories have been shared about Western's birth as a power marketing administration on Dec. 21, 1977. The hard work and good luck that led to the rapid signing of the Department of Energy Organization Act that created Western was a pre-cursor of things to come. While at times Western has had to fight for its very existence in the halls of Congress, we've continually demonstrated the hard work and innovation that have given credibility to our mission.

Here are the voices of Western employees who personally remember Western's beginnings.

Making the separation

Bob McPhail, Western's first administrator

Bob McPhail

"In the fall of 1977, DOE's right hand guy asked me to give up a secure civil service job and take on creating a whole new agency.

"On June 18, 1978, I was appointed Administrator of Western. I gave up my secure job as Regional Director of the Upper Missouri Region of the BuRec for an appointment in Golden, Colo., with an office in a 30' by 50' mobile trailer with one phone line, which was shared by my secretary, Trish Coleman, and 30 other people. Since I could not sell our home in Billings, I lived in a one-room apartment and commuted to Billings about once a month to visit my family. My wife wondered why I was attracted to WAPA. Sometimes I wondered, too, but it all worked out OK in the end.

"In the early days we had to outmaneuver the DOE and the GSA in a battle to win respect. In our first budget hearing, we asked for 300 people. The Department of Energy thought that was too much. The Acting Assistant Secretary for DOE went into the Vice President's office in the Senate building and chewed on me. Well, I chewed right back. Their reasoning was that Southwestern had 50 people and Southeastern had about 30 people, so why couldn't the new administration do the same thing? It was a harebrained idea.

"They finally realized that we were going to be here for awhile."

Joe Hall, then the first Conservation Officer in Golden

Joe Hall, Western's first Conservation Officer, had concerns about the separation from Reclamation.

"Bob McPhail and I went to the [Bureau of Reclamation] Commissioner and told him that we were concerned about this separation [of the power function]. It would split off a very vital part of Reclamation—the power marketing functions—and we thought that we should work the Hill and do something about that. And the Commissioner, who was, of course, our boss, told us to back off."

Tom Weaver, then the Power Resources Branch chief in Golden

Tom Weaver came on board as the Power Resources Branch chief in Golden.

"To set up a department, like the Department of Energy, normally in the past had taken like eight or nine years. When Jimmy Carter came into office and in early 1977, there was a proposal made to take all the marketing agencies and put them under one umbrella. That activity started in March to set up DOE. Hearings were held in June, I believe, and the legislation was signed in August, and the effective date was Oct. 1. It really went through in a hurry. People could not believe how fast that legislation went through. [With] any (other) department-level agency, it took like seven or eight years. "

Clark Rose, then the Engineering Development director in Golden

Clark Rose, the Engineering Development director in Golden, commented on Western's separation from Reclamation.

"There had been several drafts of bills put together and somehow somebody got a copy into our office in [the Bureau's] Power Division in Washington and asked us to review it. It was given to me to do that. I looked at it and had several comments to make and gave them by phone to somebody. Then the assistant commissioner Ed Sullivan became aware of it and he came in and pounded on my desk and told me in no uncertain terms that we were going to have anything to do with any separation from Reclamation and so on. And so that ended my comments at that time.

"After the Act was passed, then each office with any power activities at all was asked to determine all of the persons who spent more than half their time in power marketing or transmission. That caused a lot of hard feelings. There were those that would have wanted to move whose supervisor said, 'You don't spend that much time, so we're going to keep you.' And that went on, and names changed several times during the next…six weeks to three months."

Uncertainty and excitement

Elvin Bixler, then Transmission Lines and Substation Area superintendent in Gering, Neb.

"Employees had no idea who to report to or where our supervisors were. After a couple of years, it was a whole new ball game."

John DiNucci, then in the Office of Power Marketing Coordination in Washington, D.C.

"The whole basis for the Bureau of Reclamation was to reclaim the arid lands of the West. That's what Teddy Roosevelt had in mind when he started it. They [the Bureau of Reclamation] realized that once they lost their power feature, they lost their pocketbook. Nobody expected this thing would fly.

"The chief of the Power Division then in Washington went away and he left me acting. The staff came in and said, 'Mr. DiNucci, can you tell us who is going to go [to Western] and who is going to stay?' And I said, 'Well, I know where we're going but he [the Power Division chief] never told the staff. So I called in Personnel. I said, 'Get in there and give these people [some information]. You're gonna have a problem—the whole Bureau is gonna have a problem—if you don't do something.' Well, he told them what the rule of thumb was: how much time you spent doing what. If 51 percent or more of your time was spent on power-related functions, you transferred to Western.'

"The transition from the Bureau to DOE was painful and slow. The Bureau kept reducing our office space until finally Robbie Dooms, my secretary, and I were both in one small office along with our files and everything else. The office was only large enough to accommodate one individual. We couldn't even open the door all the way because of the furniture, and for one of us to enter or leave the room, the other had to stand up!"

Tony Toliver, then a duplicating equipment operator in Golden

Tony Toliver, then a duplicating officer, was so excited about starting at a new agency that he came right over to Western's new headquarters "office," only to discover only trailers.

"I was working for the Bureau of Reclamation and the boss came up and said they were creating a new agency. He had told me that I was selected. I was one out of 1,000 who were selected to come and start Western Area Power. At that time, two years out of the Navy, I didn't even realize there was a government agency in Colorado. I thought that was really exciting—a new agency. But the question was, 'Was it going to be in Denver, was it going to be in Huron, was it going to be in Fort Peck?'

"When I found out that I was selected and the headquarters were going to be stationed in Golden, I said, 'Man, this is an opportunity.' I volunteered to come early. At that time, I ran over (from the Federal Center), and I said, 'Well, dang!' There's two trailers here! So I said, 'What have I gotten myself into?'

"I came over with the idea that this is kind of exciting, working out of trailers. One trailer was set up for the administrative side and other the trailer was set up for the engineering side. My job was to do anything and everything. I went out and bought us a couple of copiers and started doing reproduction work. I kind of ran the supply area by borrowing supplies from the Bureau of Reclamation. I also set up our travel and our vehicles at that time. We were renting vehicles. I remember one vehicle I rented was a red Firebird. I took the Administrator to the airport because he didn't have a way to go. So when I pulled up with this fiery red Firebird, he kind of looked at me and said, 'Are you kidding me?' I said, 'Well, you could either get in here or you can call a cab—which one?' "

Establishing new territory

Ron Greenhalgh, then the assistant area manager in Sacramento

Ron Greenhalgh, tackled his first job— separating Western from Reclamation.

"One of the smartest things Congress ever did was headquarter the PMAs in the geographic areas they serve. That's specifically written in Section 302—the main body of law that transferred the four existing PMAs and the Bureau's 'power marketing functions, including the construction, operation and maintenance of transmission lines and attendant facilities.'

"Western wasn't even named in the law—wasn't an organization, didn't have a headquarters, didn't have any kind of structure or personnel. Also, interpretation of the word 'attendant' in the law was a problem. Were the switchyards attendant to the transmission lines and in Western's jurisdiction or the powerplants in the Bureau's control? Western was established arbitrarily to mirror the Bureau's offices because the people who were going to run Western were already located here. Initially, the Bureau determined that the demarcation line was where the transmission lines cross the switchyard fence—everything outside of the switchyards was Western's territory.

"However, once Western got in place, it was clear the initial determination was not workable. The line of demarcation was moved from the switchyard fences down to the high voltage bushings of the transformers in the powerplants.

"They set up a position in the Sacramento Area Office where I had both power management and operations and maintenance for the Western staff. And the first job McPhail gave me—the first job I got when I got over there from the Bureau—was to negotiate additional facilities away from the Bureau."

John DiNucci, then a public utilities specialist in Golden

"I recall the winter of 1977-78 when the Inspector General wanted to inspect all of [the] generating facilities under our jurisdiction. I tried to explain that our responsibility did not include generation, only transmission and marketing. But they refused to take my word for it. They began their inspection by visiting Falcon Dam and power plant on the lower end of the Rio Grande. This came close to causing an international incident because half of the facilities are owned by the government of Mexico. I was called almost immediately by the Commissioner of the International Boundary and Water Commission, United States Section, who demanded to know what was going on. I explained the situation and told him I had informed the IG that the Falcon facilities were not under the jurisdiction of DOE but of the Department of State. The Secretary of State then personally called the Secretary of Energy, James Schlesinger, and the matter was settled.

John DiNucci

"I'm glad I got involved with the people, did a lot of things, just watching the organization grow…it's like your own baby; he's off somewhere and you've watched him grow. Oh yeah, I'm very proud of this.

"Those were exciting times."

Ervin Loder, then an architect in Golden

"We had to locate the geographical area for Western's administrative offices or headquarters. Where are we going to put the headquarters? We had five locations, I believe: Billings, Sacramento, there was Denver/Fort Collins [and Albuquerque], and even Montrose was part of the review.

"[We] had to evaluate all of these geographical areas and then that was how we selected what we thought would be the best location."

Bob Zeeck, then public information officer in Golden

As Western's first public information officer, Bob Zeeck said his first few years were going from "crisis to crisis and building to building."

"I remember spending a lot of time jumping from crisis to crisis and building to building.

"In the early days of Western's public information program, the problems that arose were a real 'find': finding the office, finding a desk (I had three different desks in my first three days). We've, of course, come a long way since then. At that time our emphasis was on building a staff, a customer newsletter and the publishing of the annual report.

"The other emphasis was on securing office space. There was one [building] that they went down to look at off to the north from Sixth Ave. It was about a four-story building and it had a big loading dock at the back of it. The thing was surrounded with a chain link fence. It looked like a prison. I said we probably could have lived with it if

we had to, but Don [Shinkle] was adamant that by golly, we were going to get some space in Denver West because everybody liked it out there and that was where we were going to be."

Temporary quarters

Lloyd Greiner, then Systems Engineering Branch chief in Golden

"I think once it was settled it was pretty clear that [the headquarters] was going to be in Denver, although it was suggested that the Billings office simply become the headquarters and all the people within Reclamation in the Billings headquarters office transfer to Western.

"We wintered in the trailer. The design group from the Bureau also was in a trailer, so there were two groups in those temporary trailers. My group moved three times in one week within buildings within Denver West. We were moved into a building under construction and the superintendent came in and said, 'What the heck are you people doing here? You can't be here.' We were moved the next day.

"A lot of the guys who worked for me had been up on the upper floors of a very nice facility and it just absolutely drove them bonkers to be shifted around like that."

Al Peschong, then Construction Division director in Golden

Al Peschong

"Sunday after church, I went down to where I had my desk and office in the modulars. I drove up, and there were two or three cars sitting out there. I thought, 'That was strange.' The door was open, so I went in there and all the desks and everything were gone. There were three or four people up there pulling up carpeting. I said, 'Where did everything go?' They said, 'We don't know. We were just directed to get these things disassembled and out of here by Monday.'

"Temporarily, we were going into that building occupied by the Solar Energy Research Institute. I found Dwight [Jones]—he was the guy working with me. And he was sitting at a desk and he had boxes all over the place. I asked, 'Why do you have your boxes still packed?' Dwight said, 'They told me we were going to be moving again.' "

Bobby Hagler, then a structural engineer in Golden

"I remember walking into the Structural and Architectural Branch on the 9th floor of Bldg. 67 at the Denver Federal Center one morning in October 1977, right after Jimmy Carter got elected. I sat down at my 'office,' which was a drafting table in a big room with all the civil engineers and technicians, and there was a pink slip on my desk saying I'd been transferred from the Bureau of Reclamation to the newly created Department of Energy. It looked just like the slip you get when you get fired (which I've been fortunate to never have received).

Bobby Hagler remembers getting a "pink slip" telling him that he was about to be transferred to Western.

"A handful of us got the pink slip out of S&A: Dwight Covington, Don Warner, Jerry Hanson, Dwight Jones, Erv Loder, Paulette Kaptain (formerly Payne), Terry Burley, Don Groom and myself. In the goodbye photo they took of us out in front of Bldg. 67, everyone got dressed up. There was a lot of hair, plaid pants, platform shoes, white dockers for the supervisors and very short neck ties. We were really fashion trendsetters. Jackey McRee and George Manalo soon came over too—some of the last real artists who could make a photo-ready drawing by hand with only one pencil.

"We moved from the 9th floor of Bldg. 67 across the street to an old office building on Miller Court. We all got to take our government-issued ash trays. I had to structurally analyze the 2nd floor computer room because the heavy computers were located directly over the administrator's desk (Bob McPhail at that time).

"Then WAPA moved to some temporary trailers at Denver West before any of the brick buildings were built."

Larry Eilts, then an electrical engineer in Golden

Larry Eilts

"I was in the trailer. We were all crowded in there. There were no cubicles. I would guess there were about 20 of us in there. My desk faced another fella's desk and I looked right straight at him, all day long."

Ross McFate, then a lineman in Shasta

"At first, nothing really changed. Everyone reported to the same locations and managers until Western became an agency in December 1977. Demarcation points were established and facilities transferred to Western.

"Western opened an office in the Bureau office in Sacramento for the area manager and placed a double-wide trailer outside for office staff."

Scarce equipment

Susan Drieband, then the *Closed Circuit* editor in Golden

"At first I didn't even have a desk. I shared a table with the coffee pot, a cutting board and a typewriter. [Then Public Affairs Specialist] Bob Chopko and I shared one telephone between us."

Norm Miller, then a construction and inspection mechanic in Elverta

"At Tracy, our guys worked out of a 10' x 10' store room in Reclamation's Quonset hut until 1985 when the new maintenance facility was completed.

"For the first six months, our only vehicle was a half-ton pickup that we borrowed from Reclamation. We always wondered whether we'd make it on our trips to Keswick.

"I remember getting a Post Office box and starting up garbage service. I really didn't know where to start, but before long I was ordering everything from wastebaskets to hand tools."

Dennis Graves, then a journeyman lineman in Rapid City

"When I started with Western, there was a time of uneasiness because we had been the Bureau of Reclamation and then President Carter formed the Department of Energy and brought us in under the Department. We didn't know for sure what was going to change and what it was going to mean to us as employees.

"I would have to say it was a welcome change because there were a lot of the old Bureau ways instilled in a lot of the employees. We didn't have [much] equipment to maintain or to build transmission lines. The equipment we did have was inadequate."

Staffing up the organization

Pete Ungerman, then the area manager in Boulder City

"I guess at first I was the only WAPA employee then to come to Denver. I brought a core crew from Phoenix.

"The first thing we had to compete for was people.

"Bob (McPhail) and I were talking…about what should happen organizationally…So with Bob's full support and backing, I just went in fat, dump(y) and happy and started doing things."

Dora (McConnell) Wilson, then an office assistant in Golden

Former Personnel Office Assistant Dora Wilson had her hands full trying to staff the new organization and develop policies and regulations.

"We issued a lot of vacancy announcements, classified a lot of jobs and did a lot of recruiting that year. We had to detail personnel specialists from other agencies to help us staff up the organization. We experienced some problems, too, because we didn't get any additional personnel ceiling from the Department. So while we could recruit, we couldn't bring people on board right way.

"It was interesting to watch how the loyalty of the former Bureau of Reclamation employees evolved into loyalty for the new organization."

Carol Loftin, then a clerk-typist in Loveland

Carol Loftin

"My first job at Western was a GS-3, clerk-typist at what was then called the Loveland-Fort Collins Area Office. It was January 1979. We were just starting an office there, so I was the mail clerk, the file clerk, the clerk-typist, the receptionist—well, you get the picture, all the administrative type of stuff. It was one of the most enjoyable times for me at Western because we were so new, and we didn't have a lot of rules and regulations to follow."

Jim Davies, then area manager in Billings

Jim Davies helped transition the Billings Area Office to new ways of doing business after Western was created.

"A lot of people transferred in from other agencies at the same time and in some instances, you would find all new people in a particular section. As employees gained experience, the work would flow much more smoothly day to day. We've developed into an organization that is viewed by others as competent and responsive."

Becoming a family

Marge Bell, then a personnel clerk in Montrose


Marge Bell

"After DOE was established, we heard many rumors regarding the fate of our organization. But not much information was available. We did know, however, that a new organization was in the works and our work lives would be changed. There were feelings of confusion, resentment, suspicion and hurt. Some resented being placed in the new organization while others were equally unhappy about being retained by the Bureau, and we were all pretty vocal.

"We began to call ourselves the 'DOE'ers' because the name Western had not yet been announced.

"The time of change seemed catastrophic to all of us, both Bureau employees and DOE employees. Although we still worked in the same buildings and locations, we lost our sense of family.

"We gradually restored that sense of teamwork and friendship."

Bill Clagett, then deputy administrator in Golden

"[When the organization got up and running] there was enough tension in the organization about how much was going to be de-centralized in the regional office in the western states. There was enough tension, but yet enough people who cared about the organization and cared about its future. You've got to have consistency in your organization.

"It was up to Bob [McPhail] and the people who worked for him, including me, to put together an organization that we hoped would stand the test of time.

"One thing that was kind of hidden in the early days—McPhail was very much a family guy. I mean, if you were part of WAPA or you're a WAPA customer, you're part of a family and everybody has a family member.

"One of the great things about an organization like WAPA is you can make as many touchdowns as you want. You just put more people on the field with more footballs. The idea that only the Administrator could carry the football or only the Assistant Administrator, regional [administrators] could carry the football—if that's all the players you're going to put on the field, then that's all the touchdowns you are going to make.

"We all have differences, but still we're in this together; that's where I think we got a few years' good start. All I tried to do was to keep some of that. When you've got that many people working with people who are that talented and conscientious, a lot happens."

Western's Deputy Administrator Bill Clagett walks up the steps to Bldg. 18 at the Denver West Office Park in Golden, ready to face more challenges of establishing a new agency.

Bob McPhail, Western's first administrator

"The highlight of my Federal career was to serve as the chief architect and the first Administrator of Western Area Power Administration. I will always be grateful to all the people who helped me create this great organization. I feel tremendous pride when people refer to me as the 'papa of WAPA.'

"A key memory I have is the tremendous help I received from all the people in the Bureau of Reclamation; the outstanding work of Tom Weaver and each regional manager in identifying the people and facilities which were transferred to the Department of Energy; the great work of Larry Bressler and his staff in putting together our first budget that I presented to Congress; and the outstanding job performed by Don Shinkle in obtaining office space in Denver and creating the administrative functions needed to start a new organization. I cannot name all the people who worked long hours under the very difficult conditions to put together this new Federal agency.

"The greatest debt that I owe in the whole process of setting up Western is to my wife Joanne, who supported me and took care of me and our family all the time I was working on setting up the organization.

"I want them all to know that I am eternally grateful to each of them."

1980s

In the 1980s, employees witnessed Western evolving from an agency with few policies and limited technology into a well-respected organization. Construction projects, such as the Miles City or Virginia Smith converter stations, and upgrades to the Supervisory Control and Data Acquisition System showcased employees' skills. Employees also rose to the occasion and reinforced Western's mission when environmental concerns over Glen Canyon Dam operations and privatization efforts surfaced.

Early administrative policies, programs

As a new agency, Western started out with limited administrative help, policies or regulations. While some employees enjoyed the challenge of performing multiple tasks and roles without much guidance, others were stymied by the lack of structure and starting from scratch.

Charles Tally, then the supply/warehouse clerk in Golden

Charles Tally worked for Western for three weeks before discovering he wasn't hired through the proper channels.

"My first day at Western was quite an experience. It was my first civilian job ever, and I was fresh out of the Army. I was hired two weeks before over the phone and was told to come to work. When I got there, my 'supervisor,' Ted Leftwitch, met me at the door, took me around and introduced me as the new supply clerk. He then took me to the fourth floor and told me this was where I would be working. I looked around and saw nothing but boxes and boxes of supplies all over the floor, which I was to empty and then stock the supply shelves. When I asked him where the supply shelves were, he pointed to the boxes and said 'in there someplace.' So, my first project was to build the shelves, screw by screw. After three weeks and not receiving a pay check, I asked Denise Roux, (contractor supervisor for Infologix), about getting paid. Little did I know that she was my real supervisor and did not know that I was even employed by her. That was the start of my career as a fiscal specialist in Accounts Payable."

Roberta Sweeney, then a secretary in Salt Lake City

Roberta Sweeney

"When I came to Western in November 1982, Western was very young, and many things were done as best as could be. There were not many written guidelines, and many things were done as had been done at Reclamation. Can you imagine my surprise when I asked for a travel regulation or a correspondence style guide and there were none?"

Vicki Ponce, then the deputy administrative officer in Loveland

Vicki Ponce

"My sense is that DOE didn't really even know much about the power marketing administrations—we were just kind of this 'tag on' organization. That was fine, except when we found ourselves in budgetary constraints or needing FTE [Full-time Equivalent] resources or needing delegations of authority. You had to have some kind of relationship with key players in the Department."

Construction projects

The 1980s were characterized as Western's construction era. In 1978, after completing two projects that were initiated by Reclamation—the 186-mile Hayden-Ault line in Colorado, and the 177-mile Watertown-Sioux City line in South Dakota—Western saw its construction program jump from $10 million to a peak of $250 million to include Western's first high-

profile undertaking, the California-Oregon Transmission Project. Other prominent projects during this decade were the Miles City-New Underwood 230-kV line in South Dakota, the Craig-Bonanza 345-kV line in western Colorado and eastern Utah, the Sterling-Holyoke 115-kV line in Colorado, and the Miles City and Virginia Smith converter stations.

Sterling-Holyoke 115-kV line

To address excessive transmission losses and voltage drops during peak periods in northeastern Colorado, Western completed 60 miles of 115-kV line upgrade in 1982.

Bob McPhail, then Western's administrator

"When we started back in 1978, this 60-mile section of line from Sterling to Holyoke was a very ambitious project for a very new staff and a newly formed agency."

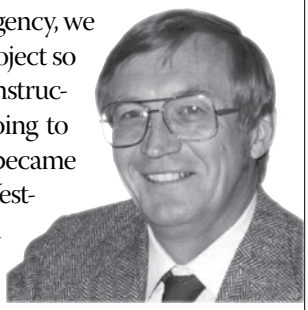
Pete Ungerman, then the area office manager in Loveland/Ft. Collins

"We (were) very anxious to get some sort of project going. We hustled out and replaced all of the poles and… upgraded the voltage from 69-kV to 115-kV on what we called the Sterling-Holyoke line. That was [one of] WAPA's first transmission lines."

Miles City-New Underwood 230-kV line

This project was an important first step for Western's construction program. The project, which started with bid openings in May 1980, included 328 miles of 230-kV transmission line between Miles City, Montana, and New Underwood, S.D. It was completed in 1982.

Lloyd Greiner, then the Systems Engineering Branch chief in Golden



Lloyd Greiner

"If we were going to a new agency, we wanted right away to have a project so that we had justification for construction, for planning. We were going to bring this project with us. It became clear that Reclamation and Western needed to get involved in that line and take the lead in being the construction agent."

Andrew Bryce, then Location and Survey Section head in Billings

"The justification was power for those people out in western South Dakota because basically it was coming from Oahe Dam, and the lines were running out and dead ending at these little substations. Those people were sitting out there without any power. One of the things that the line did was to tie all of those substations in from another source. You know, when it gets as cold as it does up there in the Dakotas, you don't want to be out there without power."

Craig-Bonanza 345-kV transmission line

One of Western's other high-profile projects in the 1980s—the 102-mile, 345-kV transmission line near Craig, Colo., to Bonanza Generating Station near Vernal, Utah—was built to improve service to western Colorado and eastern Utah. Western embarked on the project in 1985 and energized it in 1989.

Besides managing Western's early construction projects, crews were busy with annual live-line maintenance training, like this one at Ault Substation, led by Wayne Jackson, center.

Virgil Downing, then the Salt Lake City Area Office Construction manager in Montrose

Virgil Downing

"Craig-Bonanza was a partnership with several utility organizations to serve customers in western Colorado and eastern Utah that doubled our system's capacity in those areas. At the time, it was the largest ($28 million) construction contract that Western had ever awarded. It was encumbered by environmental restrictions and a lot of landowner concerns in the ranching community.

"The most limiting restrictions were in the areas of cultural and archeological site avoidance, winter habitat for elk, antelope kidding, sheep lambing and access to grazing and water for livestock. In fact, about 50 percent of the right of way was restricted about 50 percent of the allowed construction performance time.

"It was a patchwork effort that required the contractor and Western to work together to optimize every construction procedure. In hindsight, those challenges created one of best managed projects I have ever been involved in with a construction contractor. The contractor augured the first foundation hole on January 17, [1985] while temperatures were 17 below, and completed the project a month early in November of 1989.

"The biggest and most gratifying achievement for the project, and all the contractor and Western people involved, was that we built over 100 miles of transmission line with no lost-time accidents."

Linemen replace insulators on the Craig-to-Bonanza line a few years after the line was built.

Conservation and Renewable Energy Program

In 1980 and 1981, Western formally implemented the customer-oriented portion of its Conservation and Renewable Energy Program. The goals for the program were to increase energy production from renewables, reduce U.S. dependence on foreign oil, improve efficiency in energy use and reduce energy consumption.

Peggy Plate, then an C&RE specialist in Loveland

"We started Western's old Conservation and Renewable Energy Program in 1980 when we were awash in excess capacity and I was trying to promote conservation. And they were really polite.

"In 1984, language was added to all new firm electric service contracts, directing customers to develop CR&E plans. They did see the value from the consumers' side. But those were difficult times, and today everything has really changed."

Peggy Plate shows a customer how to use an infrared camera as part of the early Conservation and Renewable Energy Program.

Joe Hall, then the Conservation Officer in Golden

"[The CR&E Program] was primarily to convince the customers that the conservation activity was a good thing for them, and that however tactfully we could find to say it—it was going to be a requirement for continuing to be a customer.

"We choose the tack to try to convince them in the long run it was a good thing for them and it was a good thing for us.

"We planned to allow them to develop their conservation program. Well, we thought here we are the Fed—and maybe this went back to my training and experience that said, 'You know, we don't know everything, and we can't tell Salt River Project or some little rural electric cooperative what's best.'

"We had the range [from those] who accepted it from day one—convinced the Board of Directors—to your

hardliners who said 'this is the craziest thing I've ever had to do.' And they blamed Jimmy Carter, Bob McPhail or Joe Hall or whoever.

"My recollection was that we had no one who gave up their Federal power rather than not doing the plan. Ask them all today—the hardliners—and they would probably all say it was OK."

Dispatcher Intern Program

Western established an intern program in July 1980 to address the shortage of available dispatchers. This two-year training program—the first of its kind in the Federal government—included on-the-job experience and classroom training in the Electric Power Training Center.

Jim Hanson, then Organization and Personnel Management Division director in Billings

"The situation was especially bleak in our Billings area. Both Jim Davies, Billings Area manager, and Jerry Juba, Watertown Operations Officer, expressed their concerns to me about the power dispatcher recruiting difficulty, retention problems and the projected turnover in their area. The shortage in this occupation was due to three major factors: there had been a marked impact of evolving technology in this field; the skills and requirements had changed; and government salaries for this occupation had not kept up with public utilities."

Chuck Weaver, then a dispatcher intern in Montrose


Chuck Weaver

"My career path changed drastically when I was accepted into the first dispatcher intern program in 1980. Lloyd Nelson, Lew Gregg and Bill Hayter helped me achieve my goals and showed me the 'ropes.' Without their support and guidance, it's difficult to know how things might have turned out."

Nancy Bellows, then a dispatching intern in Loveland


Nancy Bellows

"I started as a dispatcher intern in October 1983. I remember walking into the control center for the first time, seeing how complicated everything looked and wondering what I had committed to.

"I participated in the program with three other interns at RMR—John Miller, John Moore and Jerry Ruggles. We attended two weeks of EPTC training every quarter. We were tested on theory and hands-on miniature power system operation. These tests were 'make or break,' meaning that we had to pass to continue in the program. I remember times when EPTC staff would come in early and stay late to demonstrate power system operations impacts on the miniature power system.

"We used a great deal of our time shadowing the dispatchers on the desk. Many dispatchers were happy to answer questions and share their knowledge with the trainees.

"As we became more experienced, we were given more real-time tasks to complete. We worked shift work, answering telephone calls, logging personnel into and out of substations, switching, buying and selling power, reacting to system disturbances, etc. The power industry, as a whole, did not have much in the way of training for power system operators. Western's training was superior to any that we, as students, heard of being offered elsewhere."

Bob Temple, then a dispatcher intern in Watertown

"I was in Class No. 1. I had just gotten out of the Navy and had moved to South Dakota. I ran across the job opening, applied and the rest is history.

Expectations were heaped upon us as interns—that we would spend two years of intensive on-the-job training and then go to the EPTC. Some of us were in Watertown, Phoenix and Loveland. We weren't all together.

"There was some animosity against us young kids at


Bob Temple, far left in second row, and Bill Peyton, far right in the first row, stand with fellow dispatchers in Watertown in 1987.

the time because the old timers felt we didn't have to pay our dues as dispatchers. Here we come in and sit at the desk where they had to earn what we had the right to do.


Bob Temple

"As the program progressed, we worked shift work with seasoned operators to see what it was like to make sure we could 'hack' it. I was chosen to work at Watertown. One of my first shifts was handling switching for western Nebraska. A 345-kV loop relayed out, and here I am trying to put this area back together. As the days progressed, it got easier. The system back then—our SCADA system—compared to today's technology was an antique.

"In the 22 years I was there, the system grew but the basics of dispatching remained the same."

Bill Peyton, then a power area dispatcher in Watertown

"In 1979, when the program was established with the goal of taking people off the street with little or no electrical background and making dispatchers of them in two years, I laughed as hard as the rest of my fellow dispatchers. I was wrong on my assessment of what could be done. Individuals worked very hard during their two-year training period to learn what it took most of us 'normal' dispatchers 10 years to learn."

Early technology

One main challenge for employees in Western's early days was finding adequate equipment and tools to do the work or using equipment with limited capabilities. Completing and preparing engineering designs and studies, power bills and invoices often caused headaches for employees making do with existing technology.


Dana Leslie changes magnetic tapes for Western's VAX computer in 1980.

Twyla Folk, then an electrical engineer in Huron


Twyla Folk

"When I started in engineering, we had the slide rule. When I came to Western, computers had tape with holes punched in it. If you made a mistake in a program—even a comma out of place—it was tedious to correct."

Bob Easton, then an electrical engineer in Golden


Bob Easton

"I [remember] trying to figure out what size of series capacitors should be in this area for the California-Oregon Transmission Project to make sure the power flowed where it should be. There were a lot of iterations. At the time, [power studies] just took longer to do because in the late '80s/early '90s, the computer technology just wasn't there. For a stability run at that time back in the headquarters office, we only had a VAX or microVAX machine. You would put in the study at end of the day when you left, and hopefully it would run overnight. You hoped the machine wouldn't crash. In 10 to 12 hours, [because] you are sharing CPUs, this 10-second stability run might take three to four hours of CPU time to run. Now you can sit at these laptops and run the same thing in 10 minutes."

Laurent Webber, then an EPTC instructor in Golden


Laurent Webber

"The EPTC miniature power system was designed and built around 1968. The most interesting part was the governor (speed control) simulator. That was basically an analog computer system, which required constant tuning, adjustment and frequent repair. Often, when a component failed, it was a challenge to determine the specifications and find a modern replacement to do the job. The old Dispatcher Training Simulator was a Control Data computer. Finding and replacing parts in that was a real challenge. When replacement circuit boards couldn't be found, I had to troubleshoot down to the chip level and replace those."

Bobby Hagler, then a structural engineer in Golden

"We had no personal computers then; most calculations and designs were done manually. We did have access to the Bureau computer, which took up almost a whole floor of Building 67 at the Federal Center. We had to manually punch out every single card for a lattice tower design—thousands of cards for a single design—and carry them to the computer operators, then return in several hours for our output, which would be a stack of green paper several inches thick. With one mistake, we had to start all over.

"(One of the) earliest projects I remember—the Hayden-Ault 345-kV transmission line—I drafted lattice tower and footing design drawings with a sharp pencil on vellum. My supervisor then sent me to a FORTRAN programming class to learn to write computer programs.

"Back in the '70s when everything was done manually, it would take several months to design a transmission line. Now it takes a few days. I communicate and share information with engineers all over the world in a matter of seconds. Now when our computers go on the blink, we think we're helpless."

Jeff Ackerman, then a public utilities specialist in Montrose


Jeff Ackerman

"When I first started here, I started in the Power Billing department and we put out energy bills by hand. We wrote them up and took them to the secretary and she typed them. Our meter and relay crews went out to the hundreds of meters on our system and changed the mag tapes or changed the paper tapes on the 20th of the month or so, placed them in a steel box and mailed them to the office. We would interrogate the tapes and get a print out from the computer to determine where the peak demand was. That's how we used to do our billing. We prepared all of the bills and other accounting processes—the meters and everything—on a giant spreadsheet by hand.

"Now the energy deliveries are monitored electronically by digital meters connected to phone lines and we interrogate through computers and everything is automated. [With] all the business we do right now—electricity scheduling—customers used to call in their schedules and we would punch them into the energy management system by hand on a terminal as they gave us the numbers on an hourly basis through the phone. Now we have a Web site and our customers go in, punch in their schedules electronically and send them to us across the Internet."

Debra Bean, then Procurement manager in Golden


Debra Bean

"The biggest change [in Procurement] is the way we send out solicitations—how we communicate with vendors and the public since many functions have been automated. Previously, solicitations were sent out hard copy. You developed a bidder's list and you issued a synopsis in *Commerce Business Daily*. Now most solicitations are issued electronically and there is no *Commerce Business Daily* publication.

"We had a bid opening room and posting boards, and we had visitors daily. That's rare now. We still have some bid openings in the regional offices. Of course, the Internet changed the way we do business completely. In the last seven years, the change has really been dramatic—I mean it's almost like night and day dramatic."

Charles Tally, then a fiscal specialist in Golden

"In the 1980s and early 1990s, payments were put on tapes and sent to the U.S. Treasury. We routed invoices through 'holy joes' via the U.S. mail. Any time you talk about putting something in the mail, you have a lot of problems associated with the process—people saying they never got the invoices, or the documents sat in their in box. Just tracking and monitoring bills with the manual process was time consuming. There was a lot of re-sending and re-mailing.

"I remember when we issued most payments via paper check for invoices, and when we converted to electronic payments. At that time, electronic payments got a lot of resistance from the vendors who were used to receiving checks. The switchover was a major change for them. We had a lot of small mom and pop operations saying, 'We don't have a bank.' But it has proven, over time, to be a very efficient process."

Beverly Helm, then a finance technician in Huron

Beverly Helm works on payroll processing.

"Before I came to Western, the previous timekeeper told me how lucky I was not to have to do payroll on the punch card machines. It was a difficult machine to run and was a mess with little punch outs all over the place. You ended up with a card full of punched out holes that could only be read by a machine. They apparently had these machines in a room and all the Federal offices used them.

"I began working on timekeeping more than 23 years ago. At that time, we used the brown and white preprinted time and attendance sheets. Employees submitted a timesheet and the data was handwritten on the T&A forms. In June, 1997, the RITA Timekeeping system was implemented. It was not successful at first. In November 1998, Western went live with BIDSS, MAXIMO and RITA.

"There have been some pay periods when the weather affected getting the job done. I recall one time when we were snowed in for three days, and I ended up walking 10 blocks through deep snow drifts because most of the streets were all blocked. Another time, my supervisor came and picked me up so I could get the payroll done.

"There was one pay period when we converted to an upgrade and we were still getting the bugs out of the program. The preprints had to be printed before the 'send final' or else they were lost for the entire pay period. I kept trying for at least three hours after work and they kept bombing. We had to request that DOE hold off on the payroll processing until the next morning. It was finally determined that one employee had too many work orders and it took five pages of timesheets to print and the program had a limit of three. They were surprised that anyone would use that many work orders for one pay period."

Eva Lampman,
then Drafting supervisor in Golden

"When I first started, we created and revised the drawings manually using drafting boards. I used a Leroy lettering set to do all of the text on drawings. Think how much fun a wiring diagram would be to hand letter! Computers were being integrated into the drafting area by 1989. We started with four computers and then trained existing drafters, all the while maintaining a high work load. By 1991, we had 25 drafters; we went to two shifts so that we could accommodate all of the work that we had. It was just a massive amount of people to handle all of the drafting work.

Eva Lampman

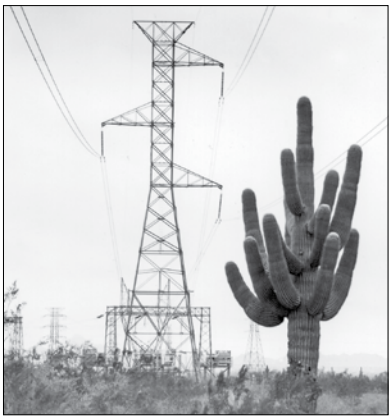
"When I was a drafting checker, it was my responsibility to check the drafter's work before it was returned to the engineers. Electrical Engineer Steve McKenna would manage to find errors no matter how hard I tried. He would bring back the entire package of 25 to 30 drawings, even if there were only three or four mistakes. He would walk up to my desk and drop the roll on my table and say in his really gruff voice, 'You screwed up, kid.' I'll admit now that he scared me to death. The other drafting checkers never wanted to check Steve's drawings."

Environment

In the early days of Western's Environmental program, regulations and environmental compliance were minimal. Throughout the 1980s and early 1990s, Western's Environmental staff size increased significantly and Environmental concerns became one of Western's top priorities.

Andrew Bryce,
then Location and Survey Section head in Billings

"The whole philosophy changed because WAPA didn't 'do' like the Bureau. The Bureau would build a transmission line and they would go from here to there—a straight line through fields. Western took this whole different philosophy—let's go out from an environmental point of view and see what was the best location you could have."



In the early days, transmission line sitting consisted of the shortest place between two points—not necessarily the best approach when considering the environment.

Vicki Ponce, then assistant administrator for Conservation, Environment and Safety in Golden

"In the department, each of the (environmental, safety and health) programs tended to fall under a different assistant secretary. The environmental program in the early days was a pretty nominal program in that it consisted of preparing an Environmental Impact Statement for some particular construction project."

Gary Frey, then Environmental manager in Golden

"No one wants a transmission line in their backyard, even though there is a demand for inexpensive Federally generated and marketed electricity. While many years ago, the siting criteria for transmission lines was the shortest place between two points, Federal statutes now have ensured that environmental concerns are of utmost importance in routings."

Glen Canyon EIS

Environmental studies and the Glen Canyon Operational Environmental Impact Statement in the 1980s were pre-cursors of big changes to come for the marketing of power from the Salt Lake City Area/Integrated Projects. The Secretary of the Interior eventually called for study flows and then interim flows to protect downstream resources in the 1990s. Maximum flows were limited to 25,000 cubic feet of water per second, compared to a high of 33,000 cfs. Minimum releases could be as low as 5,000 to 8,000 cfs, depending on the time of day. The interim flows and the cost of the environmental studies caused additional expenses for Western, amounting to over $100 million for SLCA/IP. Many of these expenses were passed on to customers.

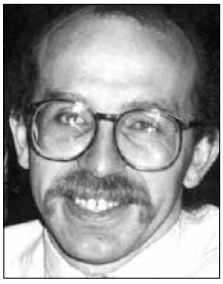
Gary Burton, then a fisheries biologist in Golden

Gary Burton

"Going back to the beginning of the Glen Canyon stuff, we were hard line—we wouldn't budge on anything. Ken Maxey, Dave Sabo and Mark Wieringa realized very quickly to get anywhere, we had to accept that we weren't going to do business the way we had been. Before that first meeting [on Glen Canyon], we could operate the dam from 3,000 cfs to 33,000 cfs. That wasn't going to be a standard option, so they accepted it. Then we got the customers to understand this is the way it is going to be, then we started getting some credibility.

"There was a transition period where we had to accept things were going to change. Either we got on board with the change and tried to protect our interest and maneuver politically or lose our ability to influence future operations."

Clayton Palmer, then an environmental protection specialist in Salt Lake City



Clayton Palmer

"Overall, hydroelectric power marketed by Western serves mostly rural areas in the Rocky Mountain, Southwest [and other] areas. Their electrical power costs would be significantly higher without these renewable resources. The environmental improvements that occurred because of changes in operation at Glen Canyon come at a cost to these people who happen to be purchasers of public power."

Water is released through bypass tubes at Glen Canyon Dam. Interim releases were authorized to protect downstream resources.

Lloyd Greiner, then the area manager in Salt Lake City

"I made several trips down the Canyon. One trip I'll never forget was sponsored by the environmentalists. They had invited media, and I was the only power representative. I got my backside chewed more than once from the reporters. There was a reporter from the *U.S. News and World Report.* After the first or second day down the river, he came over to me and said, 'OK, now that you see the problems you're causing, what are you going to do about it?'

"By reducing the flows down as far as we were, we caused problems with the fisherman. A lot of fisherman got blocked from going upstream on the weekends. They wanted a minimum flow of 5,000 cfs, and if we would have given it to them, they would have gotten the rafters on their side and the rafters would have gotten the national environmentalists on board—Sierra Club and others. [They said there was] not enough flow. In fact, they called it 'Sunday water.'

"But the customers had a political ally in their department: he was an assistant secretary from Arizona under President Reagan. He held off the whole thing. When we did that, it was the downfall on the [old way of doing business.] The Sierra Club came out and raised all kinds of issues about the fish, about some birds. They wanted to go to a flat flow, no fluctuations. They got to the idea of having a seasonal adjusting flat flow to replicate the old flow pattern of the river, you'd have high flows in April, May, and very low flows in July and August to help out some of the endangered fish, particularly the Humpback Chub."

Ken Maxey, then the deputy area manager in Salt Lake City

"There were some fairly contentious arguments about funding and operations before the permanent record of decision following the EIS. There were a lot of presentations by scientists. We went over there and argued and screamed and eventually negotiated an agreement between the Bureau and Western. We were the bad guys, no question about it. We were the guys with the black hats.

"Over time, I believe that we gained a lot of mutual respect for each other, particularly when we could demonstrate we were honest players. We didn't like what was happening necessarily and we questioned some of the science behind it and still do. But we made an agreement in good faith and we tried to stick to it as best as we could and still do.

"I went to a couple of folks that I knew—Dave Getches who was chairman of the board of the Grand Canyon Trust, who was one of the principal players also with the American Rivers and Sierra Club. I said, 'Dave, you know there should be a better way to arrive at decisions like this.' We sponsored meetings to see if there was a way to set up an organization that would promote more positive collaborative decision-making. We called it the Colorado Plateau Forum and over the years we actually turned that into a viable organization.

"Out of crisis comes change."

Colorado Plateau participants, including Western customers and former SLCAO Environmental Manager Dave Sabo, second from left, and Ken Maxey, far right, discuss Glen Canyon operations.

Loveland-Ft. Collins office consolidation

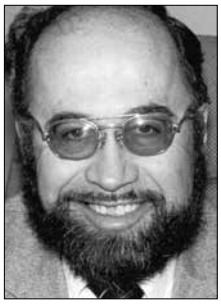
Finding adequate office space proved to be a common problem across Western. Maintenance, engineering and administrative staff in Ft. Collins and in Loveland were scattered around at different locations until construction of the new Loveland Power Marketing Operations Complex was completed in 1983 and brought employees together at one site.

Pete Ungerman, then the area manager in Loveland/Ft. Collins

"The organization that we inherited from the Bureau had an area office in Denver and district offices in Casper and Loveland. The Loveland/Ft. Collins Area Office started out with a lot of craft people and few management and administrative people. So the move to Fort Collins and the consolidation of our operation was necessary to get the area up on its feet.

GSA was sitting there saying, 'Yeah, but you can't have an office.' I mean, they were basically saying, 'You can't do this, you can't do that.' Well, Harvey [Rau] and Vicki Ponce—and perhaps others—got busy and got a lease

on the old Post Office building in downtown Ft. Collins.


Pete Ungerman

"The biggest thing was getting the office built and getting all of those people moved in. That was kind of one of my first big tasks. The Operations people had still been out at the Bureau facility until we got our own dispatch center built in the new building. I think a lot of the maintenance office people were in trailers, so there were only about half of the employees in that old Post Office building. The rest of them were scattered around. In a new building, we were able—for the first time—to move everybody on site and into that one complex. It was 1983/1984 before we actually moved in to the building.

"When the smoke cleared and we looked up, we had the area office with all the districts consolidated."

Paulette (Payne) Kaptain, then an architect in Golden


Paulette Kaptain

"This was my BIG project as an architect at Western in 1981. It was one of the first new building projects in DOE, so we focused on energy-conserving features, such as daylighting, open spaces, exterior insulation and use of recycled energy.

"As Pete Ungerman, then the area manager, worked to make flip charts for presentations at Congressional hearings, I visited sites from Loveland to Cheyenne to find the most suitable site to build the facility. GSA wouldn't let Western build an office, so we justified a 'complex' to include dispatching, construction, maintenance and power marketing. These were functions that GSA knew nothing about. Once budgeted, it was easy to add offices for the administrative folks.

"After completing the preliminary design, Western did not have enough staff to complete the construction drawings and specifications. So I was one of the first contracting officer's technical representatives for an architect/engineer contract. It was such an accelerated schedule, that the A/E firm was selected and started work with a handshake and letter agreement from the contracting officer.

"For me, the most exciting part of the project was completion—when all of the employees who were sprinkled around Ft. Collins, Loveland, Flatirons and Cheyenne came together in one location. Also, I got to go to Washington D.C., to receive one of the first DOE Special Service Awards from DOE Secretary Donald Hodel in 1984."

Miles City/Virginia Smith converter stations

The Miles City and Virginia Smith 200 MW AC-DC-AC ties in Montana and Nebraska connected Western's eastern and western transmission systems to resolve local operating problems and enhance reliability. Miles City Construction started in 1982 and the station was dedicated in 1985. The Virginia Smith converter station was completed in 1988.


Shown shortly after construction, the Miles City Converter Station helped tie the eastern and western grids together.

Lloyd Greiner, then the Systems Engineering Division director in Golden

"Through the late '70s, we actually tried to connect and operate the western system and the eastern system in one entire system. There would be a generator loss on the West Coast and most of that power would try to come from the east side of the system to replace it. Our transmission lines were on low capacity and became overloaded. Voltage would go down, lines were open then suddenly voltage would jump back up again. We were causing all kinds of customer problems. So in the late '70s/early '80s, we reached a point where the East—West separation had to be opened up. Then that provided opportunities for the Miles City DC tie."

Tom Weaver, then the assistant administrator for Engineering in Golden


Tom Weaver

"We had done something back as early as the '50s where we had tied the Yellowtail Powerplant and had some fancy, brilliant schemes to close the East-West ties. But there were problems with them. If something would happen on one side or the other, you'd end up tripping the ties and the people who lived right along the ties were not happy campers because their voltages were going up and down. Every time you hiccupped or sneezed on either side, their voltage just went up, then it'd drop down.

"It was kind of like tying two elephants together with a rubber bands. They can only go so far in opposite directions before the rubber bands snap. That's what happened every time we had a problem with the system, either on the East or the West, because the magnitude (of) the generation in both places."

Nick Klemm, then an engineer in Loveland

"In 1985, our loads on the east system were 'trapped' because there was no AC interconnection available to provide service to them. Western had to meet the customers' Federal entitlements by contracting with east system utilities. By adding the Virginia Smith Converter Station, Western could now ship power over to the east system to feed our loads.

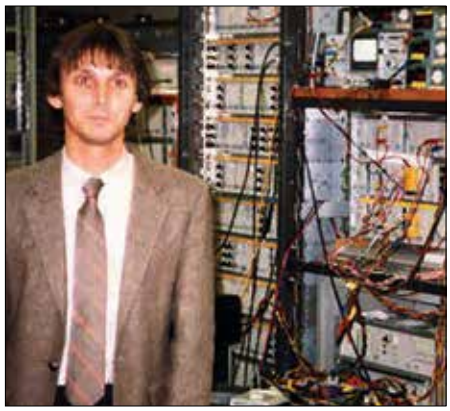
"I ran powerflow and stability studies to ensure that the station would not adversely impact the existing power systems on either the east or west side. It was definitely a challenge. I also had to present the findings to the Mid-Continent Area Power Pool for approval [to interconnect] the facility into the eastern system.

"I have a fond memory of a trip to Germany to assess Siemens' progress on the manufacturing.

"During commissioning, a problem occurred where the tie acted improperly and caused the eastern 345-kV loop between Laramie River Station and Sidney East to trip. This caused quite a lot of excitement. Siemens struggled with adjusting the controls of the tie.

"Eventually, the problem was traced to shipping bars attached to the giant outdoor smoothing reactor. Ernie Schmidt, the station's foreman, discovered the shipping bars one day while up on the roof of the converter building. The connections were glowing red from the current.

"Over the years, most schedules have been east to west, providing cheaper eastern system resources to areas like Denver."


Nick Klemm stands in front of a network analyzer while assessing progress on the Virginia Smith Converter Station manufacturing.

Privatization

Efforts to privatize Western and the other power marketing administrations surfaced several times in Congress during the 1980s, beginning with the Grace Commission in 1984 under President Reagan. The issue arose again during the Clinton Administration in the 1990s. However, with the strong support of Western's customers and numerous legislators in Western's service area, the attempts to privatize Western were defeated.

Tom Weaver, then the assistant administrator for Engineering

"[Under President Reagan], they first started talking [about how] to get rid of DOE completely. That's where they started and the discussion went down to the PMA side of things. You know, even under Jimmy Carter, there was even a time when Western was going to be forced to go to market rates. There were people at Interior and over in DOE that thought should be marketing power at market rates. They didn't understand the business.

"What they were looking at was raising additional revenues. The private (sector) was complaining that they couldn't compete with the Federal hydropower because of the low power rates.

"The thing that helped the PMAs in part is that if you take Bonneville, Western, Southeastern and Southwestern's service areas and add up all those senators in these areas, [you] get a pretty good program going to say how much this is going to cost your local people."

Jack Dodd, then the deputy assistant administrator in Washington D.C.


Jack Dodd

"There was a privatization effort that occurred a year or two before I arrived in the mid-'80s under President Reagan, and that effort resulted in Congress passing the law that said the PMAs can't even study being privatized unless Congress approves it in some future law. So Congress' action in the 1986 supplemental appropriations bill sort of stopped that privatization effort.

"Then in the mid-1990s, there was a second privatization effort when [Bill] Clinton was president. It was quite an interesting time to be in the Washington Liaison Office because we were in a position to see how all this was playing out. Once the information was released that the Administration was proposing privatization, of course, the customers had a very strong reaction.

"At the time, the PMA customers were calling themselves pitbulls—pitbulls for the PMAs. This was all occurring in 1994, the Republicans took over the House for the first time in 30 or 40 years and so there were some opportunities. And the Administration came forward with this proposal. There was a degree of support from the House of Representatives, but then our customers weighed in and it became obvious our customers had so much clout with their respective members that there was not going to be a sale of the PMAs; Congress was just not going to go along with it.

"Upper Great Plains customers were certainly very vocal within Western. I know that the customers of the Southeastern and Southwestern administrations were also very vocal. One of the first PMAs to be [considered for privatization], I believe, was Southeastern Power Administration.

"There were some questions that had come up: what exactly is being sold? Does it include the generating agencies' power facilities, not the dams themselves? That got into the question of whether private sector entities operating these Federal dams, if not actually owning, [would] be operating them by making decisions about when and how much water to release. And that started getting in all the other constituents who have an interest in Federal water projects—recreationalists and people who had their summer vacation homes on some of the Corps of Engineers' lakes saying, 'I'm not sure we want some entity who's going to operate the facility strictly for power to be the ones in charge.' And that actually helped sink the privatization proposals."

Bob Harris, then Power Marketing manager in Billings

"Privatization efforts put our customers a little bit at odds and made us all nervous. When you think you're providing a tremendous service and suddenly somebody says, 'We're going to sell you because you shouldn't be in that business,' it undercuts your motivation and makes you worry about what will happen to your job. When somebody suggests you can be sold to the highest bidder, it strikes at your core values.

"It obviously caused significant discussion among our customers. Some felt they might not be able to fight this off so it would be better to try to negotiate for the best outcome. Others felt they could stop the effort."

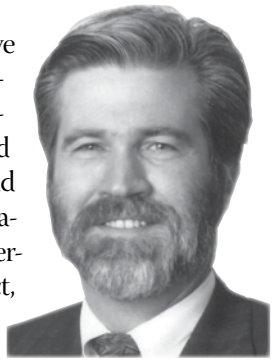
Bob Flores, then the Budget and Compliance Audit Liaison officer in Golden


Bob Flores

"Every time we turned around, for at least three years, there was an ongoing—at least one if not two—Government Accountability Office reviews to be performed on Western or the PMAs that focused on cost recovery, subsidy questions or can we, in fact, be privatized.

"For the most part, all the legislative efforts to try to privatize have not been successful. One of the largest reasons—if not the sole reason—has been the support of our customers. They see the impact. They might be doing this out of the goodness of the heart, but they also see a negative impact to them in terms of increased rates and inefficiency. It would cost them more, which they would have to pass on to their customers. This is a symbiotic relationship that exists with our customers. If we gain, they gain. If they excel, we excel. Conversely, if each one is negatively impacted, the other is also. I think both sides recognize this relationship."

Tom Graves, executive director of the Mid-West Electric Consumers Association, which represents many Western customers


Tom Graves

"Many times when we have something that works well—and the relationship with Western does work well—we tend to overlook it and forget it and take it for granted. Those [privatization] fights have not permitted us to do that. In fact, I was in a senator's office during the last PMA fight and he flat out said—and he's a very strong supporter of the Federal Power Program—but he said, 'You guys needed this fight, you're kind of like a fighter who hasn't been in the ring too much lately and you needed to get in there.'

"Mid-West was one of the first groups to react very strongly in opposition of this proposal. There's a deep philosophical commitment in the people of the Upper Great Plains to the entire concept of the Pick-Sloan Missouri Basin Program and the partnership between the Federal government and the local interest.

"Mid-West took that message to the Hill and worked with the congressional delegations. Because of all the shouting…people began to realize that it is lot more complicated than they thought it was."

> **"Northern California can't even agree with Southern California. Just think of 15 states trying to agree on how to market Federal power."**
>
> **Mark Silverman, then area manager in Loveland**

Mike Hacskaylo, then General Counsel in Golden

"As long as [the PMAs] have political support, they will survive. Bill Clagett is fond of saying that the PMAs were born in politics and they'll die in politics. And he's right."

Rate-setting/ power marketing

Setting rates was another of Western's challenges in the early days. The complexity of establishing rates for many different water development projects from which Western sells power was enough of a challenge, but staff also had to ensure they were also following the regulations to inform customers and the public about rate adjustments. They were also busy negotiating contracts and developing marketing plans.

John DiNucci, then the Marketing and Rates Division director

"The western power systems are all cheaper because the cost of fuel at that time was so cheap here as compared to the East and West coast utilities. In any case, we finally came to an understanding, and I helped work out a set of guidelines for determining how the rates should be calculated…The whole group of us got together on it, with a lot of help from the Solicitor's Office, and we finally came up with a documented set of rules and regulations.

"We finally got the Federal Energy Regulatory Commission to realize that the rate-making process of the PMAs were a lot different than private industry or even the cooperatively and publicly owned systems."

"Conrad Miller was in charge of the rates. He did a heck of a job, helping ensure every rate we sent over there we got through the FERC."

Bob Fullerton, then the Contracts and Policy Branch chief in Golden


Bob Fullerton

"A big issue back in Western's early days was exactly how the Federal government could set rates for hydroelectric projects. One of the decisions that came down from a Federal court before Western was created—back when the Bureau was still in the power marketing business—gave our power customers due process before rates could be increased. In the 1980s, the power marketing administrations became subject to DOE regulations on public participation in rate adjustments. Since Western's creation, we have been very successful in managing public processes for rates, marketing plans, environmental impact statements and other important decisions facing our agency.

"The 1980s were a time of many rate adjustment, marketing plan and contract negotiation milestones. Contracts for the sale of power from the Boulder Canyon Project were successfully negotiated. Net billing and bill crediting contracts reduced Western's needs for appropriations. Contracts were signed for the uprating of the Buffalo Bill powerplant in Wyoming, as well as for the uprating of Hoover generation.

"The Western Division of Pick-Sloan and the Fryingpan Arkansas Projects were consolidated, saving staff and customer time in the marketing and setting of rates for power. Marketing criteria were completed for the Salt Lake City Area Integrated Projects, and Western withstood a legal challenge from Utah Power and Light that vindicated the preference clause—a central feature of all our marketing plans that requires the marketing of Federal hydropower first to not-for-profit customers.

"I'll always remember fondly the dedicated men and women who devoted their talent and energy to Western's power marketing program during its formative years—Joe Hall, Tom Hine, John DiNucci, and many others. In particular, I was strongly influenced in the 1980s by Marlene Moody, Western's Assistant Administrator for Power Management, Operations and Maintenance. In addition to being a very bright, creative and caring person, Marlene was the first woman in Western's history to be a member of the Federal Senior Executive Service."

"Getting DSW to make better business decisions and focus on rate stability in the face of multi-year, double-digit rate increases was a significant challenge that still exists today in many parts of Western. Just getting many regional and CSO folks to understand that customers pay the bills, not taxpayers, was a significant challenge."

Tyler Carlson, DSW Regional manager in Phoenix

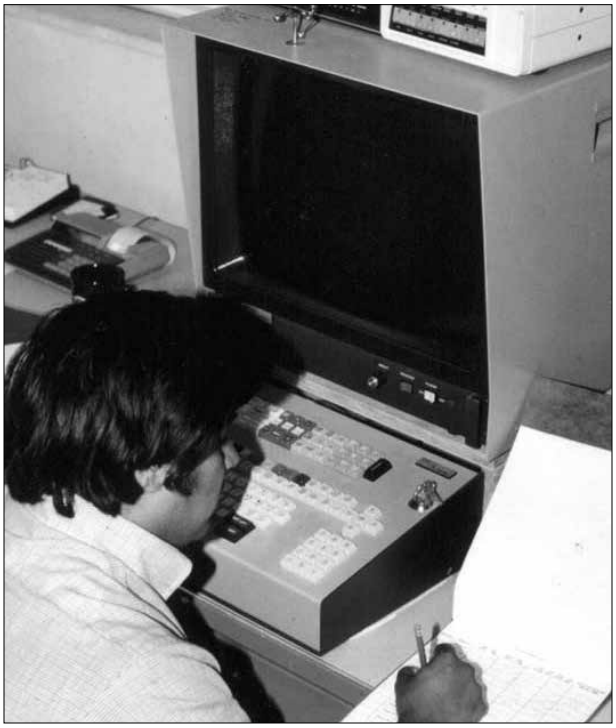
SCADA

To more accurately and quickly dispatch and monitor power line and substation operations, Western contracted with Boeing in 1977 to design a computer system called the Supervisory Control and Data Acquisition. This network of computers, terminals and remote units provided power system operators with rapid information on power line facilities. Western converted its entire dispatch system to SCADA by 1981.

Clark Rose, then the Engineering Development director in Golden

"Part of the dilemmas that we tried to deal with in early '78 was the non-standardization of protective relaying throughout Reclamation. Each Reclamation project area had [its] own ideas of what was acceptable. So we began a whole process of rehabilitation of protective relays and protective relaying, and doing a lot of updating in substations."

Clark Rose



An employee works on an old SCADA system in the former Phoenix Area Office.

"We put a new SCADA system in here, I think in the mid '80s. That phased out the old 412, which had been there for 20 years. There were no integrated circuits in it; it was all individual transistors and components. It was a huge thing—it took up one 12-by 20-foot room by itself. Nowadays, you could probably get one maybe half the size of a refrigerator. It used punch cards for input—you know that goes back to the 1950s and '60s technology. In Watertown, the whole SCADA is now run on a personal computer."

Larry Eilts, then an electrical engineer in Golden

Earl Bonneau, then an electrical engineer in Phoenix

"When I came on in '77, I was hired to do the pre-conditioning work at substations to make them ready for SCADA. Prior to the official SCADA system, various devices in substations were controlled. In each panel, you might have 15 to 20 (components); one panel controlled one breaker at one substation, another panel would control the breakers at another substation. There was no consistency. Some things a guy could do from the Dispatch Center, but with SCADA, everything could be controlled at Dispatch. It was like going from the Dark Ages into Enlightenment. Now you could get information back like how many megawatts are flowing, how much power is going this way and that way and how to balance it out. There was more visibility with everything."

Working with landowners

Acquiring lands for a substation and transmission line easement can be challenging because landowners may be unhappy to have electrical facilities placed on their land. Western realty staff coordinate with engineering and construction staff, field crews and landowners to help ensure positive community relations when Western needs to acquire land rights.

Andrew Bryce, then the Location and Survey Section head in Billings

"Landowner goodwill—Western (sought) that from the very first. They really took the feelings of the landowners into consideration. I spent a lot of time on the ground talking to people when Western started. Up in the Billings Area Office they held meetings in school gymnasiums and places like that. We held what they called kitchen camp or kitchen meetings. You always had to have them at night after the farmers got through in their fields. We tried to present what we were going to do and what it would entail.

"We really took the feelings of the landowners into consideration. We changed the alignment to fit landowner desires."

Ross McFate, then a foreman III lineman in Shasta

Ross McFate

"I remember the one property owner where we had to take the tower test for the COTP foundations. The first tower we tested and sent back. It had problems and collapsed so we had to take another one and send it back. This guy had a problem with the government. They condemned his land. There was a set of 230-kV lines going through his property and he didn't like this at all. He had us grease his windmill, and we had to fix his cattle guard because we had this heavy equipment in there.

"There are some that really don't like our line going through their property and us being on it. Most of the time they are reasonable if you talked to them. A lot of times it wasn't even us that gave them the heartburn."

Steve Webber, then a realty specialist in Lakewood


Steve Webber

"Acquiring lands for a substation and transmission line easement can be a difficult process. Often, landowners are unhappy to have electrical facilities placed on their land. Landowners often complain that lines are visually unappealing, farming is difficult around towers, compensation for land rights is hard to understand and electric and magnetic fields are a concern.

"[Some] landowners, like those we worked with on Whiterock Substation and Tap Line in Wyoming, have had previous positive experiences with Western's Lands staff and linemen. Western worked with the brothers and their father on the Limestone-Gering line easement across their property. They were pleased with Western's customer service that time and were happy to work with us again on the Tap Line project. It's amazing what landowners can remember, and these guys were no different. That previous experience with Western was extremely beneficial and made establishing trust easy.

"The ranchers were two of the nicest guys anyone could ever meet. They grew up in log cabins adjacent to the North Platte River and Register Cliff. The Pony Express stopped here, and our transmission line crosses a visible portion of the Oregon Trail. I talked to the brothers about cows, calving, grasses, ranching and settlement history in the area. The people you get to meet, as well as the interesting places you get to go, make lands work so interesting."


RM Lands Specialist Ruthette Kennedy, left, discusses a proposed transmission route with a landowner. Western realty staff and crews work hard to coordinate with landowners to help ensure positive relations.

"The biggest change I (have) noticed has been the extra effort to inform the public and solicit input from them as a project is started. Granted, this is required by law, but I believe the willingness to meet with and listen to people involved has been a big help to what I believe is a successful acquisition program."

Donald Dehne,
then a realty specialist in Huron

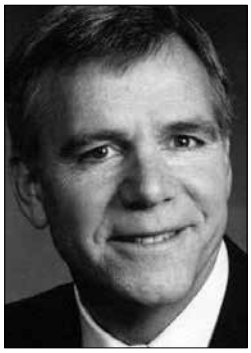
1990s

The 1990s were marked by tragedy with the Billings plane crash and uncertainty over organizational change during Transformation. An emphasis on efficiency and customers led Western to launch Energy Planning and Management Program. Safety concerns drove the agency's Fall Protection Program and a renewed focus on reliability led to the application of new technology to solve power flow and stability problems. In addition, Western employees seized the opportunity to encourage the next generation of scientists and engineers by volunteering at Science Bowl competitions.

Billings crash

Dec. 18, 1992 is embedded to employees' memories due to the tragedy that unfolded that day in Billings. Eight Federal and contract employees lost their lives when Western's Cessna Citation slammed into a warehouse after encountering wake turbulence from a preceding jet. They live on in their co-workers' memories.

Bob Harris, then Engineering and O&M assistant area manager in Billings


Bob Harris

"That crash was an unbelievable tragedy. I was in the office working late. My wife called and told me to be careful on the way home because there was a plane crash. I went to [former Regional Manager] Jim Davies' office to look out the window and could see the smoke. I never imagined it was our plane. Then when I discovered it was, there was a period of denial: 'It can't be, it wasn't.' But then you had to face the truth. It's just such a sad event.

"I knew all the passengers. Most of them I had worked with for many years. I played golf with Dale Corey. Monday [Tafoya] and I had just come off long details to Huron. It was like losing family members. It's hard to imagine that much grief, going to that many funerals in that short period of time, right during Christmas season."

Linda Cady-Hoffman, then a public utilities specialist in Billings


Linda Cady-Hoffman

"Because of the plane crash, I saw the dreams of people like Dick Schirk and Dale Corey—who talked about what they would do in their retirement—disappear in front of me. I vowed I would not wait until my retirement to do the things I loved and dreamed of doing. My view on life was forever changed. Life is more than a work title, and I'm going to make sure I live it.

"The accident helped me realize that these people we spend eight or nine hours a day with are closer to us than we think. We are an extended family whether we like it or not."

Kimary (Murphy) Larson, then a public utilities technician in Watertown

"Monday [Tafoya] was my close friend…her passing represented an unfulfilled destiny. I was not fortunate enough to know the others as well as I knew Monday, but I [could] feel the hurt their families and co-workers suffered from their losses."

Bob Fullerton, then Marketing and Rates Division director in Golden

"The plane crash was a terrible shock that made the 10 o'clock news programs on TV in Denver. Gary Miller and Dick Schirk were more than co-workers, they were friends of mine. It was a great loss to Western, but even more of a loss for the family and friends of the passengers."

California-Oregon Transmission Project

One of Western's highest priority construction projects, COTP created a new electricity pipeline in California and set the stage for public-private partnerships. The joint project among Western and its customers upgraded part of Western's existing 230-kV transmission system and included new 500-kV lines from Redding to the Oregon border, and from Tracy to Tesla, Calif. Eight years and 340 miles of construction later, power started flowing in 1993.

In 1990, Bill Clagett, left, and David Freeman of the Sacramento Municipal Utility District break ground for the COTP.

Ron Greenhalgh, then the assistant administrator for Washington Liaison in Washington, D.C.

"It took a lot from start to finish—the authorization and construction of COTP. [California Congressman Vic] Fazio got some language in the appropriation bill that said the Secretary of Energy is authorized to construct whatever facilities he deems necessary to facilitate the economic transfer of power from Oregon to northern California. Boy, was that a blanket, wide open authorization. Well, [Bill] Clagett tells me that was reaching too far and that would never have a chance. But because the Hoover Act and a bunch of other stuff were going on at the same time, people were distracted and the appropriation bill passed the House with that language in it.

[Senator] Hatfield liked the idea of having another Intertie line owned by someone other than investor owned utilities, so he got on board and supported it. With the help of Senator Burdick of North Dakota, he took the House language and championed its enactment."

Dave Coleman, then area office manager in Sacramento

"When Bob [McPhail] offered me the job, we talked about some power marketing strategies, but he said it was up to me how I handled things. He said, 'It's your baby.'

Dave Coleman

"California is a highly visible state—a bell-weather state. My goal was to make WAPA an equal with PG&E and Southern California Edison on power issues. At that time, PG&E had 22,000 employees, but I wanted WAPA to earn some respect and a place at the table.

"Jim Feider and I are fortunate enough to have a talented staff to take on major transmission projects and expand marketing plans. It took 10 years to establish Western as a force in the power field in California. We made WAPA a high-profile operation and leveled the playing field while making a significant contribution to California's growth."

Morteza Sabet, then an electrical engineer in Sacramento

Morteza Sabet

"When I came to Western in 1980, I took on that project [California-Oregon Transmission Project]—one of Western's largest construction achievements. The stars were lined up, and we were able to look at a concept that was very appealing. And at that time, customers were very interested in building their own lifeline to the Pacific Northwest, and they lined up behind the idea. The rest is history.

"Even though many in Western were not fond of a third-party financed project such as COTP, the hard fact is that Western as a Federal agency could no longer support transmission expansion using Federal appropriations."

Clark Rose, then the Engineering Development Division director in Golden

"The first year we were in business as Western, we inherited a budget of roughly $10 [million] to $11 million, I recall. The second year of operation, we had a construction budget of $25 [million] to $30 million. The third year, we went to $47 million. The fourth year, we got up somewhere between $80 [million] and $100 million. After we got close to the $100 million level, we got down to building the COTP."

Brad Warren, then on detail as on-site field engineer in Sacramento

"[My toughest job was] completing parts two and three of the California-Oregon Transmission Project. After a fatal accident, I was asked to be the on-site field

engineer for the remainder of the project. My responsibilities included seeing that the contractor was performing according to contract specifications and following Occupational Safety and Health Administration and Western safety regulations, as well as his own safety program.


Brad Warren

"The jobs involved many unusual factors, such as 450-foot towers, 2,300-foot and 3,800-foot spans, helicopter work, special conductor and high pre-stress and stringing tensions. The contractor was behind schedule and was feeling pressure from the close scrutiny of Western and Occupational Safety and Health Administration. Western was also being watched closely by OSHA and DOE. There was plenty of stress for everyone involved."

> **"It was very complicated and lots of things had to come together right. I had worked around quite a few projects where we had commissioned major 345-kV facilities—Fort Thompson, Grand Island, Watertown, Sioux City—and there were always glitches. I had forecasted that when we did the 500 [kV] out there, it would take a month to six weeks to get everything worked out. So when it first fired up in less than a week to full capacity, it blew my mind that it was that well put together."**
>
> **Al Peschong, then the Construction Division director in Golden**

Bobby Bond, then Lands Division director in Golden

"COTP was the most stressful, difficult project. There was a landowner who was 91 years old and owned 42 newspapers. He lived in [Congressman] George Miller's district in California. After one meeting, he told me that 'I could get an Act of Congress to stop ya.' We sent him a stagecoach [sculpture] for his 91st birthday and he softened up."

Ross McFate, then a foreman III in Redding

"It was a big project, and the first 500-kV system built in Western. It involved the commissioning of two major substations, one series capacitor station and 346 miles of transmission line.

"We spent many long hours, seven days a week on commissioning the substations and transmission lines. The project had a lot of visibility. Once completed, several dignitaries attended, including Administrator Bill Clagett and former California Congressman Vic Fazio [who supported the appropriation for COTP]."

Control area consolidation

Arising out of Transformation, Western consolidated its control areas on April 1, 1998, which meant transferring control of CRSP transmission from Montrose to the control areas operated by Rocky Mountain and Desert Southwest regional staff.

This map shows the final control areas after consolidation.

Ken Maxey, then the area manager in Salt Lake City

"I had an all-employee meeting in Montrose. I was hooked in by audio conference to Salt Lake. I sat on a stool and told them that we were closing down the operations center there without affecting maintenance very much. [We were] closing down the operations center and dividing it between Rocky Mountain and Desert Southwest. It wasn't a really hostile meeting. The

transmission planning operations [manager in Montrose] was enlisted to come up with a counter proposal. That was really the toughest thing I had to do…go down there [to Montrose] and tell those folks."

Bob Easton, then the Scheduling and Billing manager in Phoenix

"We literally had a guy who slept in the Phoenix control center for probably a matter of weeks…in case something went awry. It just so happened that, at the same time we decided on control area consolidation, was [when] the California Independent System Operator started up in 1998. So in the Phoenix area, there were two major changes going on—one was between the Western Area-Colorado Missouri and Western Area-Lower Colorado control areas and the [other was the] Independent System Operator starting up, on the same day—April 1.

"It was hectic because you've got different people responsible for pre-scheduling. You set a time—basically I think we said 10 in the morning or at midnight—and made the crossover to the new boundary metering points. Prior to that, everyone is just on edge; you are on pins and needles, hoping everything goes right. You are basing that operation and change on your homework to the point where nothing should be an issue, and you've got some contingency plans in case something doesn't go right. As I recall, it wasn't a big deal. Like with Y2K, we were all so doggone overprepared, nothing happened."

Jeff Ackerman, then the Resources Scheduling manager in Montrose

Jeff Ackerman

"We had an idea where we'd split the control areas, and then we had to determine how we were going to schedule [generation and loads], move the schedules and the loads, the meters, and get all those technicalities worked out together. We had to shut down this office [Montrose Dispatch], transition our schedules and generation components of the Colorado River Storage Project [Salt Lake City Area/Integrated Projects] into the other control areas. That took us six or eight months to get completed.

"We created our system to accommodate the coordination into the two separate offices while we continued to schedule here. And then after we thought it would run appropriately, we just picked a day and cut over: April 1—what does that tell you? Just kidding! From a very complex standpoint, it was a big project but it went pretty smoothly.

Environmental audits

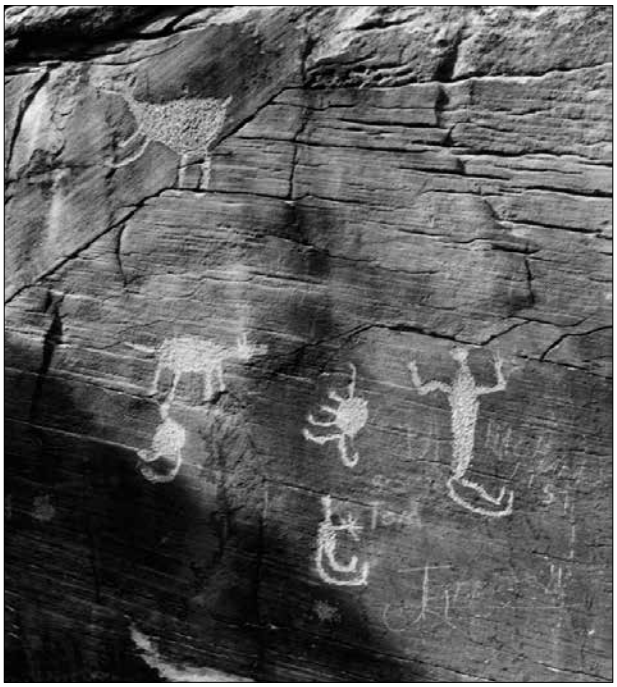
After several lawsuits and a Departmental audit, Western's focus turned to environmental compliance in the 1990s. Western staffed up its environmental program throughout the agency to ensure compliance with environmental laws and regulations.

Gary Burton, then a fisheries biologist in Golden

"History-wise, environment in Western took a big leap of importance after the DOE environmental audit. We were trying to get this agency back into compliance.

"[Then Secreatary James] Watkins had a real significant commitment from Bill Clagett, who looked at the audit and said, 'We better get our ducks in a row' and so we did. In a pretty short order, we hired up a bunch of good people.

"He was personally responsible for compliance in this agency with the Endangered Species Act, National Environmental Policy Act and anything else. Some of those have monetary fines and some of them have prison terms [for non-compliance].



Western ramped up its environmental program in the 1990s to ensure protection of sacred landmarks, endangered species and other factors.

"We talked about our two faces when we're out there... because we're standing in [the crews'] way and saying, 'No, you can't dig here, you can't drop that blade here, you can't deal with this tree, you can't put that culvert in that stream.' But we are required by law to be in compliance."

John Bridges,
then an environmental specialist in Golden

"As a result of the audit, we staffed up to almost 40 people Westernwide. In fact, each area office got an environmental manager who hired a staff to support them.

"We are required by law to certify that our Federal projects won't adversely affect sensitive environmental resources—endangered species, wetlands and floodplains. But we do this work also because we are biologists and we enjoy it."

> **"In the old days, people just took a backhoe and buried things. It was a quick and easy way to get rid of contaminants, such as motor oil. Nowadays, it's a different story."**
>
> **Jim Hartman,**
> **then Environmental manager in Loveland**

Energy Planning and Management Program

In the early 1990s, contracts set to expire in the next decade plus updates to the Conservation and Renewable Energy Program led to a policy that more directly tied firm power allocations to customers' long-term resource planning and efficient energy use. Developed in part to address the Energy Policy Act of 1992, the Energy Planning and Management Program required customers to develop Integrated Resource Plans—a planning process for energy resources. EPAMP also added a resource pool to provide allocations for new customers, which led to many more tribes receiving Federal hydropower.

Theresa Williams, then Contracts and Policy Branch chief in Golden

Theresa Williams

"I remember the beginning of the idea. A senior member of the staff said, 'That's ridiculous! This is just not how we market power.' As we worked through the details, people started selling it to the customers and then environmental groups. We were trying to make a win-win for everybody—get the marketing plans and contracts done, meet the requirements of the law and help make it feasible for customers to do a good job at Integrated Resource Planning.

"When it was published in 1995, it was a relief, but also the start of doing business differently. The resource pools were 'head-scratchers'—how to provide stability and resources to customers who were counting on receiving the same allocation and also set aside resources for new users such as Indian tribes and others. It was a big balancing act of blending environmental interests with business interests. Without doing this, we weren't going to move anywhere in marketing power."

Bob Fullerton, then the Marketing and Rates Division director in Golden

Bob Fullerton

"EPAMP represented Bill Clagett's idea that it was going to be tough to market power as we had done in the past unless there was some sort of linkage between marketing of power and something that highlighted the commitment of our customers to using their power allocations well. One of the criticisms the Federal power program received is the power is priced low and there is no incentive for people receiving that power to use it wisely.

"The idea of Integrated Resources Planning was to make sure that customers had a good sense of all the options existing on both the demand side and the supply side and to make choices that take into account environmental factors.

"We were able to extend a major percentage of the resources to existing customers. Given the existing political climate, it was gratifying and important for us and for

our customers. The power rates in their regional economies were very much impacted by the amount of power they received from us. It was also satisfying to show that we were an organization that was flexible and willing to change with the times and offer the benefits of cost-based Federal hydropower to entities that had not historically enjoyed them directly, notably the Native American tribes."

Peggy Plate, then an Energy Services specialist in Loveland


Peggy Plate

"[The idea to develop] EPAMP came from [Former Assistant Administrator for Conservation, Environment and Safety] Warren Jamison. And he's the one who really championed this to senior managers—that this is the direction we need to go because we wanted to control our destiny. He said, 'If we do this, and we get our customers to live with it and California Congressman George Miller buys off on it, it will be a lot better.' We were the only power marketing administration that was addressed in EPAMP. Basically, Warren did a great job of getting us aligned to develop the process."

Bob Riehl, then the Rates manager in Billings


Bob Riehl

"EPAMP allowed Native Americans to receive allocations without being a utility. We developed several processes to get that benefit to Native Americans. Some Native American loads you could serve directly, but indirectly these loads were already being served quite frequently by other utilities that were getting power from us, for instance, co-ops or municipals. There were several ways to pass through those benefits, and one of those was energy—the bill crediting program developed by the co-ops in this region.

"There were also some pooling efforts that were done in Desert Southwest and in some of the other regions, too, that allowed for Native Americans to make use of those allocations that were made to them as non-utilities. Benefit crediting also allowed tribes to receive the benefit of Western-marketed hydropower. There was some innovative work done."

Fall protection

Western employees pioneered climbing safety after a string of fall-related fatalities and injuries among construction contractors. Using the latest tools and techniques in the industry, the fall protection effort increased climbing safety for linemen. It showcased Western's commitment to safety, and eventually became an accepted maintenance standard.


Loveland line crew members try out new safe climbing devices, including the body harness, to meet new OSHA fall protection standards in 1992.

Paul Wermerson, then a lineman in Watertown

"Fall protection—back when I was a lineman from 1977 to 1981, it was not widely discussed. We climbed to our work location on the towers or structures, then belted in. But we still considered safety the No. 1 issue then as we do now."

Al Peschong, then the Construction Division director in Golden

"Safety became a real big issue. Construction of power lines is a dangerous business. There were several people killed on a few projects. Several of the fatalities and serious injuries were fall-type accidents. We got involved

with OSHA [Occupational Safety and Health Administration] and formed several internal teams at Western to tackle real safety programs associated with transmission tower and pole climbing. Working with OSHA, we were the leaders in the United States on fall protection.

"We formed a combination of construction and maintenance teams to see if we could find common ground. They made a lot of strides on types of equipment and how you could approach double belting—being attached at all times while you're off the ground—while you're trying to work and while you're trying to move. It's hard to be attached and moving at the same time.

"Mr. Clagett said, 'If there's a hazard, let's mitigate the hazard.' That's what we were trying to do."

> **"At first it was hard to accept. But you can't be too safe."**
>
> **Gene Herman, then an electronic equipment mechanic in Phoenix**

Ross McFate, then a foreman III lineman in Redding

"When I first started at Western, there were no fall protection measures taken. They did make us climb wood poles using safeties—we couldn't free climb like we did when I worked for PG&E. Western had several falls since becoming part of DOE, and in 1988, the Secretary of Energy made a determination that we couldn't climb until we came up with a way to mitigate falls. We were unable to climb for quite awhile until a team was put together to determine a way to prevent falls. The team visited vendors and other agencies to determine what equipment and training were available and being used in the industry.

"Fall protection was not very well received at first, but once Western initiated the qualified climber concept, it allowed linemen to climb without being 100-percent attached at all times.

"The crews are OK with most everything associated with fall protection today, as it has been in place for almost 20 years."

Dennis Schurman, then the Lines and Substations Branch chief in Golden

Dennis Schurman

"Fall protection was a change of culture that was taking men who were very proud of their work and putting them in a harness. But I was told the same thing happened when they put them in hardhats—they didn't want to wear hardhats. The new guys coming and the apprentices had no problems with them.

"I was basically locked in a room with 17 upset lineman for a week. They beat me up pretty badly, but I held most of my ground. In fact, they used to call me Mr. Fall Protection, among many other names that I can't put into print.

"I got a letter from the Occupational Safety and Health Administration saying that basically Western had one of the finest fall protection programs in the nation. So I'm pretty proud of that."

Dana Fairchild, then a lineman in Armour

Dana Fairchild

"I was very pro fall protection and was the only one. Most people thought it was nuts—fall protection, that is. The idea of a lineman leaving his body belt was unthinkable. Now a lineman uses only a harness and a tool tray and is using power tools—cordless, hydraulic, anything but a hand-powered wrench—and it is much faster and easier.

"In the old days, each crew had one truck. It was a crane with a basket. We would have to decide if we would rather have a ride in the basket or use the crane to lift material in the air. If we climbed, the crane would lift crossarms, insulators, or whatever we needed. If we used the crane for a manlift, we would use ropes or winch lines to raise the material to us. I would usually choose to climb and use the crane for the muscle, but I was young and skinny back then. Now all crews have one crane and one manlift so they seldom have to climb unless the tower is too tall to reach and then we usually take our manlift as high as we can go and then step off at maximum reach.

"With fall protection, the full body harness has really worked out fine. Everyone wears the harnesses and is better off, both in safety and ergonomics. The double-locking snaps have become standard and are no problem."

Dennis Graves, then a lineman in Rapid City


Dennis Graves

"When we were tasked with finding a safer way to do our work [using] fall protection principles, I feel that using the harness system in the aerial trucks was an easy adjustment. At first, it wasn't well accepted, but I would guess that most craftsmen would prefer utilizing the harness vs. the body belt if given a choice.

"I still prefer to use the body belt and the single scare strap to do climbing aloft. There are some things that you can't change about climbing, and I believe that is the safest and most acceptable practice to me."

Financial system changes

Western has had its share of challenges in developing, implementing and transitioning its financial management systems, such as the Financial Management System and the Business Information Decision Support System. In the late 1990s, staff were particularly challenged by implementing the new system, which is based on Oracle financial software. Until the bugs could be worked out, Western did not publish audited financial statements for two years.

Charles Tally, then a fiscal specialist in Golden

"We had to make the step forward into a more modern financial system, and I served as a member of the committee to interview vendors for a new financial management system.

"Western was one of the first Federal agencies to utilize the Oracle Financial System, we were more of a guinea pig in the process.

"Getting the newly selected Oracle system implemented required training for everyone. The biggest challenge was to keep the payments processing. Payments to vendors and/or travelers must not be delayed under any circumstance. Challenges included using two systems, transmitting payment information to Treasury, reserving funds for purchase orders, and getting vendors entered into the vendor table.

"I like the BIDSS system functionality. Some people will tell you just the opposite, but for me, BIDSS has worked well."

Bob Flores, then Compliance and Audit Liaison officer in Golden


Bob Flores

"As we gained experience and knowledge of the Oracle system, it became apparent that, as an organization, we needed more accounting expertise. Oracle required users to have some level of accounting knowledge for the everyday user, whereas FMS had not required a similar knowledge base. As an organization, we are probably much further along in using the Oracle system because of the knowledge gained in addressing implementation issues and filling the accounting void that existed in this organization.

"I don't think that I, or the organization, fully understood the magnitude of problems that were, at times, daunting in implementing the Oracle-based financial system. But Western personnel met the challenge—including CSO and regional CIO, Finance, Accounting, Budget and contractor staff.

"The success of the project was the result of many Western employees and contractors rolling up their sleeves, completing necessary research, crunching numbers, developing various queries…working long and late hours to address module and account issues and recommending and testing corrective actions to system-related issues."

Harry Pease, Chief Financial Officer in Lakewood


Harry Pease

"[From] FY 1999 to [FY 2003], Western faced significant financial management challenges as a result of the transition to our new financial management system. The transition from FMS to BIDSS in FY 1999 was extremely difficult, and despite everyone's best efforts, for some time we were not able to process and report timely and accurate financial information.

"Since then, Western's financial community—with great assistance from many others in Western—has made tremendous improvements, not the least of which have been meeting all accelerated reporting requirements and receiving unqualified opinions on our financial statements each year."

Functional separation

In 1996, the Federal Energy Regulatory Commission's Orders No. 888 and 889—that called for separating transmission and marketing functions—set the stage for a series of changes in the electrical utility industry. In voluntarily complying with these orders—as well as responding to other new operating requirements—Western staff discovered how many new job skills and responsibilities they would now need in a newly restructured industry.

Bob Easton, Transmission Planning and Operations manager in Loveland


Bob Easton

"[Functional separation] was the beginning of a series of rapid-fire changes coming from FERC. We used to do a lot of buying and selling here from the control center downstairs [in Loveland]. That's all gone to Montrose now. There used to be two desks downstairs—AGC [Automatic Generation Control] and the other was switching. Now, we've got three desks with more functions.

"We post transmission availability on OASIS [Open Access Same-time Information System], and we have this process of scheduling, which is called tagging, that's developed over the last eight years. We manage more functions at control centers than we've had to in the past, and every action is run by this electronic tagging world. You still have to have a person in the room to do a sanity check on what this electronic world is telling us to do.

"We've had to increase the manpower on the transmission scheduling and security desk to manage the OASIS and the tagging and the constrained paths we manage in our area. AGC is still manned—they still have a person watching the control area, frequency, water levels and things like that. There is a switching desk that's always been managing all the outages and all the switching that goes on with that. All the [Balancing Authorities] in North America are adjusting to the new rules on how you have to manage your transmission system. Everyone is dealing with the same issues."

Ron Moulton, then the Restructuring manager in Phoenix


Ron Moulton

"Prior to functional separation, the transmission business for Western was more of an ancillary business to the power marketing function. Our primary business was power marketing—marketing Federal hydro resources—and transmission was really kind of an afterthought. Subsequent to Order [No.] 888 and Western filing an Open Access Transmission Tariff, transmission became a business of its own—a business that in my view offers tremendous opportunities for the future of Western as a transmission provider/operator providing interconnection and transmission services."

Jeff Ackerman, then the Resources and Scheduling manager in Montrose

"Life was a lot simpler before functional separation—FERC Orders No. 888 and 889 on open access and competition created a lot more players in the game, a lot more people handling electricity and moving it across the interconnection.

"When I started here in 1983, our scheduling log—what we used to account for energy transfers and energy that we delivered had 300 lines—300 available transactions in our scheduling system. After functional separation took place, we now handle thousands of transactions. A lot had to do with consolidating the control area, but it also was a result of so many more people out there moving energy transactions.


Jeff Ackerman, standing, watches the monitor as Real Time Energy Management and Marketing Specialist Lee Holliman schedules energy.

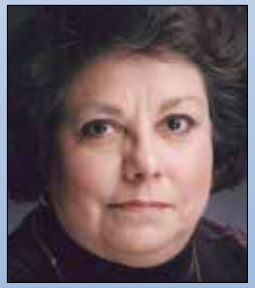
"Before functional separation, we did everything in one office—scheduled the transmission system, wheeled for people, served our firm electric service obligations. We also bought and sold energy, and we did it all in one group from a pre-scheduling standpoint. Dispatchers on the desk also did it themselves—bought and sold electricity, watched the reservoirs and watched the transmission."

Mike Hacskaylo, then acting administrator in Golden

"For Western to expect to survive, we had to blend the best Federal agency authorities with what a corporation does. We had to be flexible enough to deal with issues and quick enough to respond to issues within the context of the Federal government.

"Due to restructuring, Western had to act more like a private utility than a Federal utility when representing the customers."

"Western historically offered available transmission at cost…but we had difficulty obtaining transmission arrangements over certain utility systems due to industry changes arising from FERC open access orders. Western's voluntary compliance made it easier to obtain those transmission services and clarified our position on open access."



Liova Juárez, then deputy General Counsel in Golden

Kayenta ASC Project

Western teamed with Siemens Energy of Germany and the Electric Power Research Institute in 1992 to solve a long-standing power flow problem in Arizona, Colorado, New Mexico and Utah. Western staff took advantage of the latest technological engineering advances—advanced series compensation or ASC—to ensure better regional reliability.

Bill Clagett, right, shows Hubert Essl of Siemens Energy, left, and Assistant Energy Secretary Mike Davis a display of the Kayenta site in 1992.

Tony Montoya, then the Engineering manager in Phoenix

Tony Montoya

"The Kayenta project allowed Western to shine in a world class research project. The project consisted of the very first application of high-voltage power electronic devices, known as thyristors, to control series capacitor banks. Since the project was the first ever, there was so much that wasn't known. To complicate things, we were competing with a similar project that the Bonneville Power Administration was participating in.

"We assembled a project team consisting of individuals from the Salt Lake City Area Office, the Montrose District

Office, the headquarters office and engineers from Siemens in Atlanta and Erlangen, Germany. The great thing about the project was the diversity of expertise among team members. We learned so much from each other because there was so much to learn and contribute.

"The Kayenta Substation is located in northern Arizona near Monument Valley. I remember that the Siemens engineers from Germany had preconceived ideas about the area based on old western movies and Roadrunner cartoons. They couldn't believe that such a desolate place actually existed. When we took them to the site for the first time, they found the area much more desolate than they ever imagined. I remember flying with them into a little airstrip near the town of Kayenta. A herd of sheep were grazing on the airstrip. We had to buzz the runway and circle until the sheep scattered. The Siemens engineers couldn't believe that we were installing such a state-of-the-art device in such a remote location.

"Ultimately the project was a success and we finished ahead of the competing project. We discovered many new engineering concepts on the project and published at least a dozen technical papers in international conferences. I'll always have found memories of the Kayenta project team."

Phase-Shifting Transformers

Western teamed with the Electric Power Research Institute, Siemens Energy and the Navajo Nation to apply a new technology—phase-shifting transformers—to solve system stability on the Shiprock-Glen Canyon line in New Mexico. Western staff not only showed innovation and teamwork to solve this problem, but they helped solve a problem that had been going on for almost two decades.

Virgil Downing, then the Salt Lake City Area Construction manager in Montrose

"As a joint project with EPRI and Western, it was an extremely high-profile project. It used thyristor controls, which were an emerging technology that hadn't been used in the past. The technology allowed operators to better control power flow and improve system stability. It was anticipated that the [capacity on the] Shiprock-Glen Canyon 230-kV line would be increased by 30 percent.

"It showed that EPRI, Western, Siemens and the Navajo Nation could work together in the interest of advancing technology and improving the power system in that area of the country.

"The Shiprock-Waterflow PST [phase-shifting transformers] was an extraordinary project effort for our organization. The Salt Lake Area had never really experienced that magnitude of effort to purchase, install and commission equipment. It was at a time when we had to use a lot of contract support staff, not only for installing (the phase-shifting transformers), but for doing the construction supervision and equipment testing.

"I remember the challenge of moving very large equipment that was shipped by rail to Gallup, N.M., and then over land by truck to the new Waterflow Substation and the expanded Shiprock Substation. The heavy hauler had to ford the San Juan River outside of Waterflow, N.M., because there was no bridge heavy enough to transport equipment over. The heavy haulers drove over that concrete spillway with the load weighing in excess of 600,000 pounds.

"The project was significant in that it relieved loopflow on the interconnected system operated by other WSCC members by linking key Western facilities in all regions."

"Using phase-shifting transformers to solve an 18-year-old inadvertent flow problem in the Four Corners area showed our ability to locally implement a solution that benefited the entire region. It took our technical staff, crews, operators, budget staff, the [Washington] liaison folks and many more to make this happen. We were the outfit that brought people and organizations together to solve the problem."

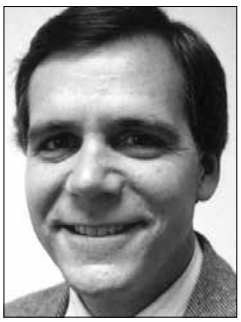
Bill Clagett, then Western's administrator

Native American allocations

Western's Energy Planning and Management Program opened the door Westernwide for many more Native American tribes to receive the benefits of Federal hydropower. The program changed the requirements that customers must have utility status to receive an allocation of Federal hydropower. Now Western has about 100 tribal customers.

Neil Messer, center, of the Bureau of Indian Affairs listens to discussions about EPAMP at a customer meeting in the early 1990s.

Bob Harris, then the Power Marketing manager in Billings



Bob Harris

"Allocating power to Native American tribes as part of the Post 2000 Resource Pool was a real challenge. We had always delivered power on a wholesale basis to preference entities with utility status or end use loads. So we asked, 'How do we deliver power to the tribes without utility status?'

"We had a kick off meeting in Billings. All the tribes in the marketing area were in attendance. There was a ton of people. Tension was high. We described the Resource Pool, and the tribes expressed their strong desire to get low-cost hydropower delivered to them. The tribes, especially along the Missouri River, felt they contributed substantially to the Missouri River Basin Program and our low-cost hydropower would go a long way to help compensate them for those contributions. After a long and grueling discussion, Jim Davies, then the area manager, assigned me—the Power Marketing manager—as the point of contact. At the time, I certainly didn't realize the effort that would be involved in building those relationships.

"We met with Mni Sose, who had representation from most of tribes in the region and was nice enough to host a forum for us to consult with tribes on our resource pool allocations. Leslie Kerr and I drove to Rapid City every month for what seemed like several years consulting with tribal representatives until the resource pool allocation process was finally done. These meetings allowed us the opportunity to describe our power program and figure out a way to deliver power and energy to the tribes without compromising our principles. The tribes were able to provide their view of history and how the dams affected their culture and lives.

"Over that whole period of time, it was really about building relationships. We had a relationship with our firm power customers, but we needed to build a relationship with the tribes in the region. They really appreciated seeing the same faces, getting to know us, and trusting us a bit before they signed on the dotted line.

"It was certainly a learning experience for me. In the end, I think we were successful. The tribes are still benefiting from their allocations, and we made some new friends along the way."

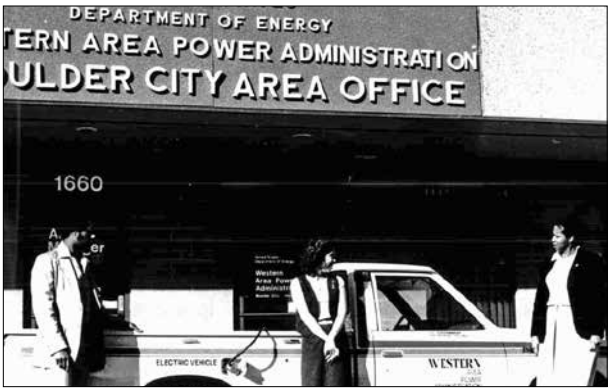
Greg Vaselaar, left, speaks with a Native American customer at an annual meeting.

Office moves

In the 1990s, Western employees moved to new buildings across town or in some cases in a new state as the agency consolidated functions or took other cost containment measures.

Boulder City/Phoenix consolidation

The consolidation of the Boulder City, Nev., Area Office with the Phoenix Dispatch center in 1991 saved Western more than $2.5 million annually, but the transition was difficult for those with long-standing ties to the Boulder City Area. For others, the move presented new opportunities.



Herman Simmons, left, Anita (Norton) DePoe and another employee stand in front of the Marshall Plaza Office, a temporary office for Boulder City Area Office employees before the BCAO office was built. In 1991, BCAO employees moved to the new Phoenix Area Office.

Herman Simmons, then a power utility specialist in Boulder City

Herman Simmons

"The year 1990 began with high spirits throughout the office, however, it had been tense for my family as we worried about political unrest and the possibility of war in Saudi Arabia unfolding. I was in the Army Reserve and could receive a call to deploy within 72 hours.

"Shortly thereafter, BCAO employees were notified of the decision to consolidate the office with the Phoenix office by June 1991. This was not news anyone had expected, but we embraced it with strength and agility. Employees had two options: Western would help employees seek other viable employment, or they could relocate to Phoenix and continue in their current position.

"The facility in Phoenix would not [immediately] accommodate all the staff moving from Boulder City to Phoenix. Temporary quarters for some offices were set up on Reclamation's property with double-wide trailers. While the new facility was being built, it was completed in various stages. That period of time set the ground roots of what teamwork meant. As we resettled in our new environment, employees did often ask, 'Who will be the last to turn out the lights in BCAO?"

Brenda (McKissack) Jefferson, then a public utilities specialist in Boulder City

"I was the last employee to move to Phoenix, due to the birth of my daughter Julianna. When I arrived in Phoenix, I was surprised to find out that my office was overflowing with boxes labeled Brenda. All the boxes started arriving in Phoenix with my name on them because I was the last to arrive. I couldn't get in my cubicle because the boxes were stacked up over the cubicle walls and to the door. I sat in another office until they could figure out where to send all the files in the boxes."

Mary Ann (LoCascio) Lowell, then a fiscal clerk in Boulder City

"In 1977, when Western was formed, a decision was made to locate the Area Office in Boulder City. In 1989, the decision was brought into question. A study was made of the benefits to consolidate the offices and further reduce duplicate functions, and be closer to the large Arizona customer base.

"The physical move was staged over one and a half years, allowing time for employees to make decision on employment and the move. It was a challenge because we were already a large family in Boulder City. How do you break up a family? The decision for us came down to, 'Do I want to leave a small town (about 10,000 people) and move to big city with millions of people?' It made us all make difficult career choices. Some moved on to other jobs. For those of us who did move, it turned out to be an

Boulder City Area Office finance staff pose, from left to right, Laurie Sue (Westwick) Antonio, Hal Bernhisel, Betty Blythe, Mary Smith, Peggy Baker and Mary Ann (LoCascio) Lowell and the Financial Manager Myrna Vallette. Of this group, three made the move to Phoenix.

opportunity. I had been living in Boulder City for 20 years and was forced to push open another door and it worked out for me. I'm now a budget analyst."

Sacramento Area Office move

While employees in Western's Sacramento Area Office didn't move far—about 20 miles to Folsom—they did share the experience of transitioning into new offices in a new town.

Sacramento Area Office employees worked in this building on Cottage Way in Sacramento, then on Markston, Alta Arden and Bell streets before moving to a modern facility in Folsom in 1995.

Dave Coleman, then the area manager in Sacramento

"When I arrived in 1980, the Sacramento Area Office was in five different offices. We had some people in one office, some down the street. It was not accessible. I asked [Bob] McPhail if I could find better space. I looked at an old Post Office building that the Post Office didn't want anymore. Birds were coming in and out of the roof. I wanted something for an agency on the move, not going downhill. Eventually we leased out the first floor on Bell Street before SAO moved to Folsom and the Nimbus Dam in 1995-96."

Salt Lake City Area Office move

Employees in the Salt Lake City Area Office had their share of moves, but several were just down the block.

Roberta Sweeney, administrative assistant in Salt Lake City

"The office has moved three times since 1982: from 438 East to 257 East (both on 200 South) in the mid-'90s and finally to 150 Social Hall Avenue in 1999. It's amazing how much can be collected in such a short period of time!"

Corporate Services Office move

In 1999, CSO employees moved from the Denver West Office Park in Golden into a new building in Lakewood.

Theresa Williams, then the Administrative Support manager in Golden

"There were some organizations and people who I really wondered if they were ever going to pack. We said, 'You're moving tomorrow,' and still they just kept working away as though nothing was changing. The most extreme case was one employee in Building 19 who actually went to the extent of wrapping his cubicle in yellow caution tape on his move day—he never packed himself, someone else did it because he refused.

"The move wasn't just about packing and moving in, it was a whole year of adjustments and asking questions. People had to re-establish a routine. We were uprooting a lot of people. There was so much history and daily routines that revolved around Denver West."

Billings Area Office move

Billings employees moved into a new building two blocks west of the former location to consolidate Billings operations.

"One thing we realized we would miss about our old building is how yearly crises, such as floods and failed thermostats, pulled everyone together."

Connie Hilzendeger, then the area manager's secretary in Billings

Science Bowl

To help DOE promote math and science among high school students, Western sponsored its first regional Science Bowl competitions in 1992. For the last 15 years, employees Westernwide have served as scientific judges, moderators, rule judges, scorekeepers and timekeepers at these regional contests.

Science Bowl winners, like this Huron High School team in 1999, inspire Western employees about the future. At far left is Greg Vaselaar's oldest son Dustin.

Greg Vaselaar, then the South Dakota Regional Science Bowl coordinator in Huron

Greg Vaselaar

"We've benefited from the publicity to Western. Students and members of the community, who wouldn't necessarily know that we exist, now know us.

"The first Science Bowl we sponsored in 1994, I remember the feeling of accomplishment when that first team went to Washington D.C., and the reaction and appreciation from the teachers and the students. I remember the first time we set up the auditorium at the high school for the Science Bowl. We put the banner up and had everything in place and stepped back and said, 'Wow, this is really going to be fun.'

"All three of my sons have participated in the Science Bowl, and I would be remiss if I didn't say it was one of my most memorable times. It was little bit nerve-wracking when two of my older sons were on two different teams, and they were competing in the finals. That was pretty memorable. Thankfully, the older son's team won out against the younger son's team. It's nice when family order is not disrupted."

Tyler Carlson, DSW Regional manager and Science Bowl volunteer in Phoenix

"Community involvement has always been important to me, as well as fostering young people's interests in pursuing math, engineering and sciences studies. The Science Bowl is great opportunity to do both. These areas of study are not only important to Western, but are also important to our future as well, as we will need new sources of energy, new ways of environmental management and new energy efficient designs."

"To see this number of kids participating in the Science Bowl each year restores my faith in the system and the future of our nation."

John Crowfoot, then the RM Science Bowl coordinator in Loveland

"I worked as coordinator for about six years and attended the National Science Bowl as a volunteer. Working on the Science Bowl is a very rewarding experience. I met many people and gained a vast amount of knowledge about the Department of Energy and its laboratories. I gained an insight and an appreciation of our youth of today and how hard they work to achieve their dreams and visions.

"It may sound extreme, but it is true that volunteers for Science Bowl return for many years because of the love and passion for learning and education of our future scientists, mathematicians and engineers."

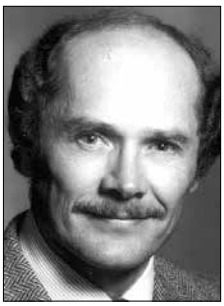
Transformation

In response to budget pressures and industry changes, Western senior managers initiated Transformation in the mid-1990s to slash costs and make the organization run more like a business. While Transformation did help the agency achieve more efficient operations, it also impacted some employees' positions and sense of job security.


TRANSFORMATION
BULLETIN
WESTERN AREA POWER ADMINISTRATION
Reengineering begins at Western

Transformation Bulletins **were distributed regularly to keep employees informed during the reorganization.**

J.M. Shafer, then Western's administrator



J.M. Shafer

"During most of 1995, Western went through an exhaustive, participative and change-oriented Transformation process. The result was a structure that placed decisionmaking closer to the customer to increase responsiveness and timeliness, and reduce overhead from the Corporate Services Office in Golden for an annual savings of about $26 million.

"Western's construction budgets had dropped from about $120 million annually, heading toward the $20 million to $30 million level by the mid-'90s. It was pretty obvious that things had to be cut back.

"The beginning of Transformation wasn't as much pressure from DOE as it was a realization that we had to minimize things. We wrestled very much with the impact on employees.

"My three years as administrator were the toughest times in any job in my 37 years of Federal service."

Ken Maxey, then the area manager in Salt Lake City


Ken Maxey

"Before FERC Order No. 888, we were starting to hear how…the industry was going to change. How are we going to react to that? Cost competitiveness was entering into the de-monopolized industry. I remember [us] saying, 'Shouldn't we be looking at something that would make a major impact—cut $50 million dollars out of our cost structure?' People started thinking and started the steel ball rolling down the hill, and that grew into Transformation—looking at rate stability and keeping ourselves competitive and our rates down.

"I think there was a lot of trepidation, uncertainty, a slew of change.

"It was an all-employee's meeting and I think the city of Montrose had representatives there at the time. Ironically, the mayor of Montrose was one of our dispatchers. J.M. Shafer and I went down and met with the city manager folks and talked with them. Congressman Scott McGinnis called me personally, chewing [me out] for not giving them heads up on Montrose. Absolutely no one else thought of that either. Then General Counsel Mike Hacskaylo and I…had a meeting where I did a lot of the explanation about the operation of the transmission system, why we were proposing to close that down and divide it among other places. That went pretty well. It kind of defused the political problems.

"People were more concerned about their jobs. They were unhappy—a couple of people in particular. Most people were accepting. I think they saw that most of the effect would be taken care of through attrition, not necessarily going to RIF [reduction in force]."

Tyler Carlson, then the area manager in Phoenix

"Transformation challenges were difficult. I found the most difficulty in trying to communicate business and rate needs/pressures to a work community that was essentially government in nature and not competitively positioned. The rate increase pressures that we were trying to attack at that time are similar to the increases in work that we are facing today.

"Customers were generally supportive of the attempts to become more efficient, but at times pushed back when it looked like they may be impacted negatively. The bottom line in one project was a reduction in costs that is still being felt positively today."

Eva Lampman, then Drafting supervisor in Golden


Eva Lampman

"Transformation was a tough period of time for me. I had 30 drafters at that time and then I had to downsize just as Engineering did. It's hard to lay off people; I lost almost half of my department at once. It was very emotional.

"I had such a small department at that time. I thought, 'What am I going to do? With 30 people I stayed busy. What am I going to do? I'm going to be bored.' Boy was I wrong, I haven't been bored yet."

Earl Bonneau, then a supervisory engineer in Yuma

"Up until that time, I was a supervisory electrical engineer. With the new regulations, I didn't have enough people under me to stay a supervisor. My position was changed from supervisory to non-supervisory and my responsibility increased considerably. It was something I had no control over. I simply accepted it. In some respects, it made my job easier, but in other respects I had more responsibility because I had more stuff to maintain in the same amount of time.

"I remember a comment made by an engineer in Golden: 'If you could go out and touch a piece of equipment, your job would not be impacted.' That made people in Golden up in the air—those were the ones with uncertain futures. Another comment made by senior management was, 'A year from now, you might not be in the same position or in the same location, but you'll still be with Western.' You had people doing things their way for a long time who didn't want to or could not adapt."

Dennis Schurman, then the Lines and Substation Branch chief in Golden

"With change comes resentment and stubbornness. If people don't support it, it's very difficult to implement it. Western was a changing culture back in the 1990s, and with it a new mindset from 'Command and Control' to 'Collaboration.' Western needed people's minds and ideas, not just their backs and hands. I was a member of the original Covey 'preachers' [*Seven Habits for Highly Effective People*] and we toured Western, putting on training sessions for almost everyone. While there were many people who probably criticized this effort, it is my view that it helped promote the culture change at Western in a very positive way."

Bob Flores, then the Compliance and Audit Liaison officer in Golden

"Looking back, Transformation was a necessary but painful effort in trying to 'right size' Western. The Compliance and Audit function was significantly impacted by the philosophical issue—essentially 'checkers checking the checker.' This issue resulted in the office staff being cut in half, to a current FTE (full-time equivalent) level of five.

"The resulting impact of Transformation did make us look at our relative position within Western and what we brought to the table. It forced us to focus on those functions that were truly necessary and added value to Western. It resulted in re-engineering of our processes and related programs. The result was a re-positioning of the office within the transformed Western."

Roberta Sweeney, then secretary to the area manager in Salt Lake City

Roberta Sweeney

"Transformation brought many changes to the Salt Lake City Area Office. Many of our engineers moved to Montrose or found other positions within Western or outside. This, in turn, meant downsizing in the Salt Lake Office itself. With fewer people, we no longer had the time or staff for an internal newsletter, an employees association, or tutoring at the local junior high school to name a few of the areas impacted. People seemed to have changed as well."

"Transformation prompted me to substantially change my career and my involvement with Western's primary mission. With the move to IT, I became more aware of the underlying support functions that help Western meet its primary mission of supplying safe, reliable electric power. Cyber Security work has helped me to develop many important skills and without Transformation, I may never have gone in this direction."

Laurent Webber, then an instructor at the EPTC in Golden

Carol Loftin, then the Rates manager in Salt Lake City

Carol Loftin

"Transformation affected me personally because my job at CSO was abolished. Fortunately for me, I got the Rates manager job in Salt Lake City. It was a very hard move for me. Since my son had just graduated from high school and wanted to stay in Denver, I made the move myself."

"One of biggest benefits for me personally was that I got married about a year after I moved out here, and I have a wonderful husband, two new daughters and a granddaughter."

Debra Bean, then Procurement manager in Golden

"Transformation decentralized many procurement functions and decision making authority to the regional offices. For example, construction work went to the regions. When I came to the old headquarters office, there

were 28 FTE, and in Transformation, the level was cut to 13. It was a 60-percent reduction in this one office and significantly changed the culture and how procurement operated in Western.


Debra Bean

"Of note was the change in the number of GS-12s in the new CSO office. I had to reduce from eight to three in the new office. The fact is that the eight went to zero by the time we met the reduction target. I had to hire more people because we either placed GS-12s in the regional offices or they left Western for other organizations. It's a testament to the creativity and energy of the people in Procurement that we effectively supported the mission of Western during Transformation, while these key people were leaving."

Frances Telles, then the Administrative officer for Management Services in Phoenix

"I was part of the group that implemented some of the changes in the organization—soft landings. We developed a laundry list of options to transition people and how to place them. I was very proud of the success of that team and the options we developed and how they worked.

"Through a 'Commitment to Soft Landings,' we provided a staffing pool, job sharing, understudy positions, flexiplace, telecommuting and leave without pay options. That was when relocation bonuses were just getting started. We recommended that we request those tools be delegated down to Western—providing flexiplace and telecommuting. Again, back then it was not something we were doing a lot of—it was so new."


Francs Telles

Tony Toliver, then a support services specialist in Golden


Tony Toliver

"When Western was going through downsizing, I was a chief union steward and empowering employees. At that time, nobody knew what was going to happen. They were doing reassignments, they were doing directed reassignments, early retirements—so everybody was a little shaky. Western empowered the employees to take on more responsibilities. I thought that was so positive because it kept people busy—it kept people's minds off what was taking place. It was positive for the organization because we found ways to cut costs. If anybody had a cost-cutting idea, management was all ears."

"In the early '80s, stability was the norm and our position in the industry was very secure. We were very traditional in our management structure and systems. That is, problems were solved and decisions were made by shooting them up the chain. At the time, it was very appropriate. However, as we matured, we became more bureaucratic and structured. Essentially, we built barriers in every direction. It was human nature.

"In today's environment, our customers are demanding that we make every decision with the bottom line in mind. That's what the Transformation process was all about—getting back to basics and operating like a real business."

Clark LeDoux, then the Administrative officer in Loveland

2000 to today

THE NEW MILLENNIUM

The new millennium started with fears of possible computer glitches due to Y2K, but soon gave way to other concerns about budget shortfalls, drought, the California energy crisis, Human Capital Management, PG&E contract expiration and creation of Western's sub-control area, regional transmission organizations and other industry changes. Yet there have also been many successes in this decade to celebrate, including the building of the Path 15 and Hoover Bypass projects, composite conductor installations, a new marketing plan and operating environment in northern California, and transmission system changes, including interconnections and new services for wind-powered generation.

Y2K

The transition to the new millennium caused some trepidation among Western employees who were unsure if Western computer systems would recognize the new date correctly, which could have impacted power system operations. In fact, a whole project was created in 1997 to prepare Western in case the worst happened. Fortunately, when New Year's Day in 2000 dawned, there were no major computer glitches.

Laurent Webber, Cyber Security manager in Lakewood

Laurent Webber

"Y2K was not as exciting as everyone might imagine. We planned for that fateful night when nothing happened.

"For our IT systems, we had shut down everything that was not essential because we didn't want the systems running unattended as the year rolled over and have them go haywire.

"Later on when they brought the systems back up, we watched them to make sure there were no problems. There was a concern that there would be attempts at breeches of our system, but we didn't have any issues like that."

Don Nord, then the Y2K project manager in Lakewood

"People often now look back and think that Y2K proved to be an unrealistic scare and a wasted effort. But think of it like taking precautions for other potential disasters. Is conducting fire drills a wasted effort if your building never catches on fire?

Don Nord

"We were ready—'We' meaning not only Western, but the entire electric utility industry. We were fully prepared to operate the power grid manually, to communicate without phones and to conduct all of our [essential] operations without computers.

"My most significant memory was, of course, the night of the rollover. We monitored the culmination of Western's efforts from the Y2K control center in Room 390 [at CSO]. As part of the Electric Power Research Institute team, we followed the new millennium's march around the globe by observing details about its impact on the power grids in New Zealand, Australia, Israel, South Africa and Britain. As it turned out, of course, there wasn't any [problem], but it was still quite an experience."

BMXi upgrade

One of Western's most complex and exhaustive team efforts was the software upgrade of the financial and maintenance management systems in 2003. This upgrade to the Business Information Decision Support System and Maximo system impacted almost every employee throughout the agency, from accountants and craftsworkers to engineers and IT specialists.

Jeanne Kern, then the Maximo coordinator in Folsom

"As a newly hired regional Maximo coordinator, the biggest obstacle for me at the time was just trying to fill the shoes of my new position. I felt somewhat overwhelmed as I had so much to learn in so little time. My struggle was to catch up to the point where I would be able to assist in providing training and documentation to support our Maximo users. Even traveling was a new experience for me, flying to CSO and other regional offices for meetings and workshops was an adventure, but very enlightening.

"Change can create frustration, but I was impressed with how everyone throughout Western seemed to pull together for a successful implementation, despite the setbacks and difficult decisions that had to be made. I am proud to have been a part of it and am looking forward to the challenges ahead."

"There were many challenges the team encountered, but in the end, we accomplished our goal and added project management expertise to Western's talent pool."

Eun Moredock, Chief Information Officer, in Lakewood

Don Nord, a project manager in Lakewood

"This was a very large administrative project, with a very diverse team—CSO and regions; Feds, consultants and support services contractors; BIDSS and Maximo users. The applications (BIDSS and Maximo) are doing the job. We positioned Western technology for the future, and we gained valuable experience for future upgrade projects."

Blackouts

Utilities nationwide got a wake-up call on Aug. 14, 2003 when a tree fell into a powerline, causing a domino effect that shut down more than 102 power plants in nine seconds. That blackout led Western to refine training for dispatchers and add vegetation management to field crew operations. Two earlier major blackouts in July and August 1996 in the Western Interconnection led to Western taking on a regional reliability role within the Western Electricity Coordinating Council.

Bob Easton, then the Engineering and Planning manager in Loveland

Bob Easton points to a map of the Western Interconnection, which experienced several blackouts in the late 1990s.

"I remember the '03 (blackout) pretty well because I was at the Minneapolis airport. The Ops and Planning managers had met in Watertown for several days. On the TV, we saw people just pouring out of different buildings, and pouring out of subway tunnels and pouring across bridges in the east part of the country. We thought, 'What the heck is going on?' Sure enough—it was a major blackout.

"The guys from Billings got on the phone to talk to Watertown to just piece together what had happened. What it boiled down to was trees, training and tools.

"We've got higher visibility with the Forest Service on how we should manage the rights of way on their land. The number of hours required for [Western] dispatchers on training has exploded for them to keep their certification. And the tools being developed for the dispatch centers and reliability centers are getting more sophisticated.

"I wasn't affected by the blackouts in either July or August 1996, but those two incidents basically changed the whole West's approach on what we call reliability coordination. We've instituted [reliability coordination centers] in Loveland, California and the Pacific Northwest for a wide-area view of the system. Those entities basically developed out of those '96 disturbances."

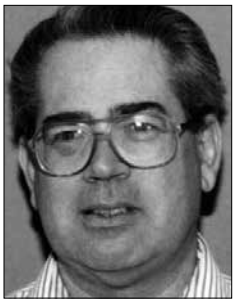
LaVerne Kyriss, then Corporate Communications manager in Lakewood


LaVerne Kyriss

"I found out about the 2003 East Coast blackout because Mike Hacskaylo, who was on vacation at the time, called and said there had been a major blackout. I called Watertown dispatchers to get an update from them on what they knew. They helped us monitor the situation that day and updated us on what they knew. I briefed the Corporate Communications staff and promptly took about 50 media calls.

"As the afternoon unfolded, we found out that the problem was with clearing vegetation, and trees contributed to the blackouts. Reporters had asked the question, 'Could this happen in the West?' I told them the same thing could and did happen twice in the summer of 1996."

Smitty Payton, then a power system dispatcher in Loveland


Smitty Payton

"[The grid frequency] was rather frightening to look at, as I watched it dip lower and lower. I had never seen the frequency dip as low as it did that day [on July 2, 1996]. I thought all the generators would trip, and we'd be sitting there with no generation on line and no lights and have to dig out our black start procedures."

Budget

In its three decades as an agency, Western has gone from relying heavily on Federal appropriations to focusing more on alternative financing methods, advanced customer funding and third-party financing of large projects.

Bob Riehl, Power Marketing manager in Billings

"In the beginning, there were appropriations—all of our activities were funded with appropriations. Since that time, there have been a few different ways of dealing with a lack of appropriations. It still requires congressional authorization to spend money, but funding has moved to net billing. We've always net billed those costs between us and other electric utilities. It's not really new, but it has expanded considerably since the '80s. Today net billing, in combination with customer financing, aids in funding some of Western's power facility needs.


Bob Riehl

"Since that time, we've also used bill crediting, where one party owes the second party money and the second party owes the third party money and you work billing arrangements among three parties. That has aided in the funding for Western, or lack of funding."

> **"The Budget Enforcement Act of 1990 grouped the Federal budget into mandatory and discretionary programs and established very strict budget rules for the creation or the passage of legislation—either appropriations or authorization—that would affect the budget deficit. That was where we first started going off into this direction of having our receipts on the mandatory side of the budget and our program appropriations on the discretionary side. Today we are being squeezed on our appropriations even though we are not really making a contribution toward the budget deficit."**
>
> **Jack Dodd, assistant administrator for Washington Liaison**

California energy crisis/ deregulation

With FERC Orders No. 888 and 889 allowing wholesale trading of electricity between generators and customers nationwide, California became the first state to pass electricity deregulation legislation and introduce retail competition. That led to an energy crisis of rolling blackouts and unprecedented energy prices from May 2000 to September 2001, which directly affected Western's purchase power costs.

> **"Here in California, we (ran) an obstacle course for a couple of years with blackouts, bankruptcies and a host of other problems. We then began starting to sprint to reach our goal of having some fundamental business changes in place in less than two years."**
>
> **Jim Keselburg, then SN Regional manager in Folsom**

Tom Boyko, then the Power Marketing manager in Folsom

"The California energy crisis had a tremendous negative financial effect on our customers. One customer chose to become its own energy service provider right before the start of the energy meltdown. By the time they secured long-term arrangements, the impact of high prices on their rate structure was so excessive that the resulting increase in rates caused the utility's board of directors to be ultimately recalled.

"Spot market power prices were initially at the self-imposed California ISO ceiling of $250/MWh and ultimately settling at $750/MWh over the entire western United States. A number of our customers who were not adequately hedged with sufficient long-term contracts are still feeling the financial consequences of purchasing high-priced power during the height of the crisis.

"Many of our customers, along with Western, were involved in PG&E's bankruptcy proceedings. Many of our customers had to deal with power suppliers defaulting on supply contracts, leaving them un-hedged and short of power."

Mike Hacskaylo, then Western's Administrator in Lakewood

"I think deregulation in the electrical industry had a hard time working because the structure of the electrical market was just not mature enough to deal with all the changes. Electricity must be used when it's generated, you can't store it. This makes it very dynamic in terms of how you deal with the market and how you price it.

"On several occasions, the California Independent System Operator ordered large-scale load curtailments in an effort to prevent a major system collapse because power demand was higher than the available generation resources. For the first time in my memory, whether the lights would be on in California during the dinner hour and whether businesses would have enough energy to operate was the lead story on the evening news across the nation."

Bob Fullerton, then acting assistant administrator for Power Management, Operation and Maintenance

"I remember when Betsy Mohler, the former FERC Commissioner and Deputy Secretary of Energy, asked Western to undertake an inquiry regarding the impact of electric utility industry restructuring on Western's power allocation policies. She wanted us to complete the inquiry before the completion of power marketing plans in Salt Lake City and Folsom.

"She asked us to conduct a public process to gather comment on several questions, including: Should Western's existing policies—including the term of our firm power contracts—be modified to take into account changes in electricity markets that have occurred? Should Western allocate Federal hydropower directly to end users such as schools? In a retail choice environment, what additional steps should Western take to assure that the full economic benefits of preference power are passed through to consumers? Should Western require its customers to offer retail access to their consumers as a condition of receiving a preference power allocation in the future?

"Many comments from customers, investor-owned utilities, environmental groups and Native American tribes were received. Western concluded that our power allocation policies had already been altered in a responsible and proactive manner in response to changes in the utility industry. Once DOE agreed with our analysis, Western was able to publish in the *Federal Register* our responses to comments on the issues raised by the inquiry. That same day, June 25, 1999, the final post-2004 power marketing plans for the Salt Lake City Area/Integrated Projects and the Sierra Nevada Region were published."

Common OASIS

In 2004, Western and other utilities teamed up to offer a common transmission marketplace, called wesTTrans.net, a single Web site for participating transmission providers' Open Access Same Time Information Systems. The wesTTrans.net common OASIS provides transmission customers an easy way to obtain transmission rights across the Western Interconnection.

Ron Moulton, then the restructuring manager in Phoenix

"I think Western played a very significant role in the early stages of the formation of wesTTrans. We served as perhaps the glue that held the two sides together long enough to see this common interest and to make it a reality. While we all hoped it would happen, [we] never dreamed it would. It was a very positive outcome for virtually everybody in the Western Interconnection.

Ron Moulton

"This is Western's storefront for offering transmission services and generator interconnection services. It's kind of like an Amazon.com for transmission service."

Bob Easton, Operations, Engineering and Planning manager in Loveland

Bob Easton

"Before wesTTrans.net, you were just dealing mostly with your neighbors to buy and sell transmission to move energy when you needed it. That's basically what dispatchers did. This was done by dispatchers and was all done over the phone. There was so much less activity. You didn't have all these different marketing entities trying to see what points of receipt could be matched up with other energy and resource entities. You just called up your neighboring dispatch center, your neighboring transmission provider, and began making the same deal you've probably been making for years. They were the only game in town and you knew you could count on them.

"Who's buying mostly has changed. The transmission providers or sellers are the same as they have always been, but who's buying now is an organization like PowerEx, which is an offshoot of British Columbia Hydro, or Cargill, which I always thought of as a commodities firm—different entities that decided to set up a power marketing arm. They put together deals. There are some deals all the way from the East Coast to California. Somehow there is such a spread in the energy costs that they can afford to go over the three, four or five different transmission providers and pay $2 a kilowatt for some of those jumps and the $15 on the costs and they still come out making a buck somehow."

This map shows the transmission entities belonging to wesTTrans.net, a common transmission marketplace in the West, in 2007. (Map courtesy of wesTTrans.net.)

Composite conductor

In 2002 and 2004, Western teamed up with DOE and the 3M Company to test whether a promising new technology—composite conductor—could withstand icy conditions on the Jamestown to Fargo No. 1 230-kV line in North Dakota and extreme heat on the Liberty-to-Parker No. 2, 230-kV line in Arizona. Resulting performance data, which demonstrated the conductor's integrity after being exposed to extreme temperatures, is helping determine the new technology's promise of adding transmission capacity to the grid without replacing existing towers. Western installed the composite conductor in 2006 on the Topock-Davis 230-kV line.

UGP linemen members Casey Blotske and Brian Heisler install composite conductor in North Dakota in 2002.

Steve Rock, an electrical engineer in Lakewood

"This project was unique because it developed a partnership among DOE, the 3M Company and Western. It introduced Western to a new conductor technology at a time when the phrase 'constrained transmission paths' was just becoming popular. As a result of this partnership, the two projects [composite installation in North Dakota and Arizona] took shape.

"The test was done to show whether the new 795-kcmil aluminum reinforced conductor composite could mechanically withstand extreme summer and winter conditions. Initially, the line was strung with 954-kcmil aluminum conductor, steel-reinforced rail conductor. During the test, 3M used high-tech equipment to monitor tension, sag and current loss.

"With three times the current-carrying capacity, it could help alleviate some of Western's constrained paths."

Mark Depoe, foreman III lineman in Phoenix

Mark Depoe

"Coordination of DSW's 3M test conductor project was really fun because we got to meet a lot of people who were experts in their chosen fields. Everybody worked well together to get the design work done, and to get the conductor installed and energized. "

"Involvement by Western in these types of projects is a good idea. Developmental projects like this might not ever get off the ground unless DOE (and Western) support them."

Customers

Western inherited 457 firm power customers when the agency was established in 1977. Today, nearly 700 utilities, state and Federal agencies, irrigation districts and Native American tribes customers rely on Western's cost-based, reliable hydroelectric power. From senior managers and rates staff to field representatives, Western employees make customer relationships a priority—especially understanding and addressing their unique requirements.

UGP Regional Manager Bob Harris presents an award to a customer in 2002 for achieving significant energy savings.

Bob Harris, UGP Regional manager in Billings


Bob Harris

"We have a relationship with our customers which I'd classify as shoulder to shoulder behind the plow. Our customers celebrate and commiserate with us; they are more than customers. They work hard to help us be successful.

"On many occasions, our customers understand when they have to sacrifice individually, but it's fair and equitable across the region, so they accept it graciously.

"It's always been a joy to me working with our customers, knowing they are not in it just for themselves. They understand the value of public power and Western's program. The goal is always the same—provide quality low-cost power to the guy at the end of the line."

Peggy Plate, then the Energy Services manager in Loveland

"I think some of the things we have to offer can help [customers] reduce their risk because the whole marketplace is just a gamble. Who do you buy power from? Do you think this is going to be the best price? Well, gas prices go up. What's going to happen with coal prices? Coal prices aren't going down. We're going to have to pay more. How can we make a community more efficient and sustainable? How do you track business if you're charging 12 cents a kilowatthour? It's real intriguing.

"In the long haul, we want public power to thrive. That's what Western is. We're a good partner."

Jack Dodd, assistant administrator for Washington Liaison in Washington D.C.


Jack Dodd

"One of the things I learned very quickly was how the whole debate about public power vs. investor-owned power was almost an article of faith—I guess I've heard it called a belief, like a religious belief—that people who grew up in the public power community felt very strongly about the importance of being a separate, publicly-owned, community-owned, cooperatively-owned part of the utility industry to serve as that counter balance and yardstick for the investor-owned utility business."

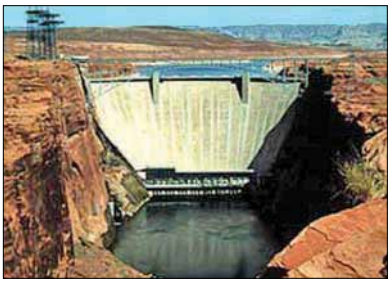
Greg Vaselaar, then a field representative in Huron

"The most important thing when you visit a customer is to know them. It's important to know their wheeling arrangements, who their co-suppliers are, issues that are impacting them—be it state and local politics or other issues. When you visit a municipality, in Iowa or South Dakota or Minnesota, their issues are going to be a little different than meeting with a rural electric cooperative with membership services resources.

"I really enjoy this job because of the customer interaction and assisting people to understand; communicating with a group or a customer who has found value in what I have given them."

Drought

After years of below-normal water conditions throughout its service area, Western employees have become accustomed to large purchases of power to meet contract commitments and adjusting rates and marketing plans to account for higher drought-related costs.


The drought has taken its toll on many dams within Western's service area, especially Glen Canyon Dam, shown here when water levels were higher than they have been recently.

Mike Cowan, Technical Services manager in Lakewood


Mike Cowan

"With the long and protracted drought we've experienced in the Colorado and Missouri River basins, water levels and generation have been on the decline, while purchase power costs have been on the rise. We've seen the average price for energy go from around $30 a MWh up to around $60 a MWh. Our total purchase power expense has also risen from something around $100 million to over $400 million per year. I remember when we considered any resource above $30 a MWh expensive. This was just five to 10 years ago.

"At the beginning of water year 2005, there was a good probability that Glen Canyon (Lake Powell) could have dropped below minimum power pool. This was a concern for both water supply and power production purposes. What Western and the power customers could do to prevent further drawdown was very limited because the Colorado River is operated for water supply purposes that are higher priority than power production.

"While we had a slight reprieve from severe drought conditions in water year 2005, the concern of declining reservoir storage at both Lake Powell and Lake Mead continues to be very real."

Jeff Ackerman, Energy Management and Marketing manager in Montrose

"When I first started here, we were going through a very wet period—the most water and generation to move through the system on record since the CRSP was built. That's when we had spillway damage at Glen Canyon. We were just dumping water. The last seven years, we've been in a very serious drought where we were close to minimum power pool at Glen Canyon. We've gone from spilling water to purchasing large amounts of power.

"It's changed the way we've done business with all the restrictions put in place with regard to the Endangered Species Act and fish below our reservoir. It's made operations very complex.

"There are only one or two of us in the [Energy Marketing and Management] office now that have ever really seen the reservoirs full. I've never come into the office and said, 'I don't know where we're going to get the energy we need,' but there were times when the reservoirs were so low with Glen Canyon, I wondered if I would see Glen Canyon full again before I retired."

Carol Loftin, Rates manager in Salt Lake City

"In 2000, our office had large purchase power expenses and high non-reimbursable expenses, which almost depleted the CRSP Basin Fund. I remember very plainly writing four different rate packages in an effort to stay solvent. Fortunately for us, the customers ended up agreeing to take a lower allocation amount, which helped us to reduce our purchase power costs. None of the rate packages went further than [then administrator] Mike Hacskaylo's desk.

"Reducing the customer's energy commitments was very hard for our office, because the process had some winners and losers. I think this reduction was a great collaborative effort by the CRSP MC office and its customers. The larger, more self sustaining customers did not want us to purchase anything for them, and the smaller ones were willing to pay a higher rate—to be guaranteed their commitment. In FY 2009, we will be closer to what the energy commitments were before 2004.

Carol Loftin presents an award to Richard Judd, former General Manager of UMPA, a Western customer in Utah.

"Even though we are doing well with repayment, it isn't as fast as we have projected from 11 years ago. For example, when I started at this office, the original CRSP project and additions were projected to all be repaid by 2013; now in a preliminary 2007 study, we are showing that those same investments will not be repaid until 2019. So we are taking longer than we had anticipated for repayment. The reason? You guessed it—high purchased power costs, rising Operations and Maintenance, and non-reimbursable expenses. Well, let me put it this way: one of our customer's general managers calls me 'the queen of pain,' since all I ever do is raise the rates. It is tongue in cheek, of course, but I am glad that we do get along so well."

Energy Services

Western's Energy Services Program helps customers find the resources to improve energy efficiency, use renewable energy and improve their competitive positions in the marketplace. The program has evolved to meet the changing needs of Western's long-term, firm power customers by providing energy resources, technology transfer and technical assistance services with Integrated Resource Planning.

Ron Horstman, Energy Services manager in Lakewood

"Energy services is the customer service aspect of our business. Our business is not transmitting and selling kilowatthours but providing comfort, convenience, time savings and the engine that drives our economy. Teaching our customers how to make sound energy decisions is very rewarding to me.

"The first few years, customers were focusing on conventional generation resources such as coal and gas, with little emphasis on efficiency and conservation. When the

Ron Horstman stands in front of a Western display showing Western's Energy Services Program highlights.

price of energy moved upward, the focus shifted to renewables and conservation and efficiency. There is also a value being placed on environmental issues, not so much from a dollar value as of today, but from an environmental preservation/stewardship value.

"The issues surrounding climate change have prompted customers to look at renewables and other clean energy technologies and compare them to environmentally unfriendly generation options. This is exactly what Integrated Resource Planning is all about! Giving consideration to all available options, including environmental issues, allows planners to make sound decisions."

Greg Vaselaar, a field representative in Huron

"One thing you hear a lot of [from customers] is that they really feel that large hydro should be considered a renewable. That's a philosophical/political debate, but a lot of them always take an opportunity to mention that to me. They really feel they've been in renewables ever since they started buying Federal hydropower back in the '50s.

"When we first initiated our IRP requirement after the Energy Policy Act of '92, I had a customer who told me in no uncertain terms what a bureaucratic mumbo jumbo process this IRP was going to be. He had no time for it, and it was going to cost him money. He had to hire a consultant to do an IRP. Well, five years later in 2000, we tweaked our IRP rules and they could submit a state plan or minimum investment report. When I went down to tell him that he could now get out of this IRP, he said, 'Oh, I think I'll do an IRP and hire consultants, it was so useful.' In five years' time, he really changed his tune. He realized how useful it was to have documentation for future utility planning and decisions."

Greg Vaselaar, right, meets with tribal customers to talk about IRPs and other Western services.

Hoover Dam Bypass Project

In 2003, Western staff joined the U.S. Bureau of Reclamation, Federal Highway Administration, National Park Service and the states of Arizona and Nevada in a project to build a new bridge across the Colorado River, bypassing the highway that spans the crest of Hoover Dam. To accommodate the new bridge and highway approach, Western engineers designed a new line from Mead Substation to Hoover Dam and made changes to reconfigure connections to the powerhouse roof.

Western engineers stand on the Arizona Powerhouse roof during work for the Hoover Bypass Project.

Chuck McEndree, then Hoover Dam Bypass Project manager in Phoenix

"The work to reconfigure the transmission line connections at Hoover was complex, not only because of the location—on the roof of the powerhouse about 480 feet below the top of the dam—but also because of the tight schedule dictated by a planned maintenance outage on the two affected generating units."

Bobby Hagler, a structural engineer in Lakewood

"The Hoover Dam Bypass steel poles are highly visible, spanning the canyons and valleys and dotting the desert mountain tops around Lake Mead. I designed and ordered $2.2 million of double-circuit poles for this project. Many of the structures are adjacent to the highway, which crosses Hoover Dam, and are located right next to the guard rails which protect automobiles from plunging hundreds of feet into the deep canyon.

"One of my fondest memories is inspecting the finished poles with Gary Frafford, the Western construction inspector. Gary has a hook for one of his hands, and when

I was holding onto the highway guard rail for dear life to keep from falling over the cliffs, Gary just leaned over, and kept on truckin' like he was a boxcar on a railroad track.

"It gave me great pride to see the finished transmission line crossing this national landmark of great historical significance which is visited by thousands of tourists every year."

Human Capital Management

As Western managers recognized the potential for a large number of employees to retire in the next decade, the agency launched a significant effort in 2003 called Human Capital Management to recruit and retain a quality workforce to prepare for the "baby boomer" generation exodus.

Debra Bean, then Procurement and HR manager in Lakewood

"The [Workforce Planning] team worked with our most critical occupations and used the Workforce Plan to design recruitment strategies. It was interesting trying to figure out how to keep people here—offering recruiting bonuses and family-friendly programs. We worked a long time on the student program to make it easier to understand and use for managers and students. We went over marketing and branding, fine-tuned the student program guidance and tools and worked very hard on making sure the hiring process was sound.

"The lasting legacy of the team is a multi-functional and focused look on how Western looks to the outside world and how we work together to promote Western."

Frances Telles, Human Resources manager in Lakewood

"I think (Human Capital Management) was important because it created much more awareness of the issues that we were going to be facing in the next three, five, 10 years. I think some of the data has been validated. Even though there are a lot of employees who may be eligible to retire, we're seeing from the data that they are not necessarily retiring. Employees seem to be staying a little longer.

"It highlighted the fact that we needed to do something to transfer knowledge from employees who have been with Western a long time and have a lot of historical knowledge. If they left tomorrow, what are we going to do to make sure we are able to capture their experience and knowledge so that we don't reinvent the wheel?"

Sam Miller, then a general engineer in Billings

"Developing young engineers to understand the maintenance, engineering, environmental, operational, tariff, finance, contractual, procurement, planning and transmission system issues will be a huge challenge. It takes time to develop seasoned staff and engineers, especially planning engineers, but to expect new engineers to have enough background and understanding of the transmission system issues with only a few short years on the job is unrealistic. We need a coaching/mentoring program to train and educate our younger employees to carry-on after the seasoned engineers/staff retire. So much knowledge has been lost, and will be lost, over the next few years. What a shame to lose such a valuable resource that Western invested so much into cultivating and growing through the years."

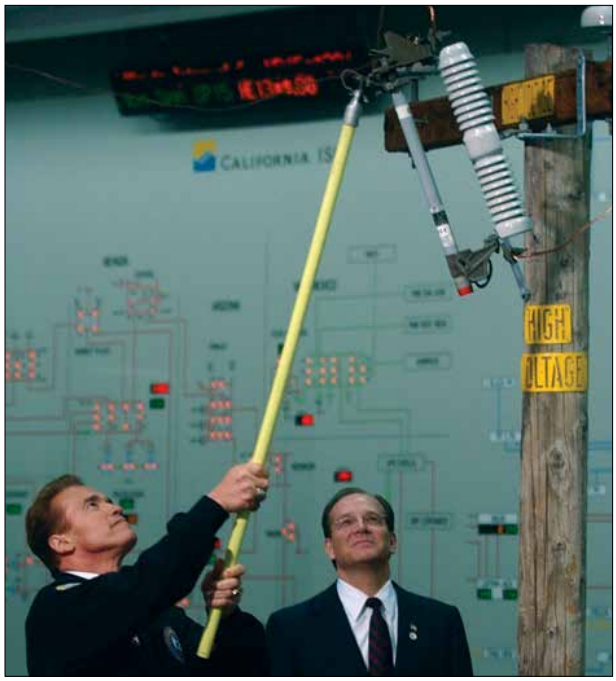
Frances Telles, standing in the middle of the front row at far right, and other Workforce Planning members were recognized in 2007 for ensuring a quality workforce as part of Human Capital Management efforts.

Dana Fairchild, foreman II lineman in Armour

"I don't want to forget to mention the young generation. People worry about kids who just want to sit around and play with video games. I must say these young lineman that Western hires these days just keep getting better—they can do it all. They are smart, good operators and hard workers."

Path 15

In 2001, at the direction of Energy Secretary Spencer Abraham, Western set out to manage the construction of the Path 15 Upgrade Project, the historic public-private partnership that led to construction of a new 500-kV line. Path 15 was the culmination of an upgrade originally envisioned as part of COTP in the 1980s to relieve transmission constraints in central California.



Calif. Governor Arnold Schwarzenegger, left, closes a disconnect switch as part of the Path 15 commissioning ceremony while then Deputy Energy Secretary Kyle McSlarrow monitors the action.

Jack Dodd, then deputy assistant administrator for Washington Liaison in Washington, D.C.

"We knew right from the start that this would be done with some other party providing the bulk of the money. We accepted that as a given and said, 'OK, we'll have to work with putting out a request for people who would be interested in participating in this project.' When [we] saw this was going to be done with non-Federal money, that sort of took Office of Management and Budget out of the picture of being a controlling influence over how things went. And for that matter, it took Congress out of the picture. It was going to be Western working directly with these non-Federal entities to see if some sort of agreement could be reached.

"I think the general attitude back here [in Washington] is that Path 15 is a success story—one that we can be proud of, that's up and running, came in under budget and basically on time. I think most people back here in Washington consider it a feather in our cap."

Tom Boyko, then the Path 15 Upgrade Project manager in Folsom

Tom Boyko

"The need for the project was first identified during the late 1980s, but for a variety of reasons, it was not built at that time. It resurfaced during the energy crises of 2000 and 2001. We were in the process of acquiring financing when the electrical industry experienced a financial meltdown. One project participant was in bankruptcy, and the revenue stream which would repay the project participants originated in an entity that was insolvent. At the same time, the California Public Utility Commission did not support the project.

"With all this financial uncertainty, it was very difficult to secure the needed private financing. The CPUC eventually did come around and acknowledged the project's value in reducing congestion on a major intrastate bottleneck, and we were able to secure the assurances needed to acquire the necessary financing.

"Path 15 definitely brought a change about on how to get money to do projects. By successfully acquiring private financing, Western demonstrated the feasibility of using a new source of capital for future Western projects, and at the same time demonstrated that a public-private partnership model could work very well. The public-private funding approach used in the Path 15 Project generated very positive feedback from others in the industry and reflected very favorably on Western's role in the project and as a leading transmission owner/operator.

"Since the project was put in service, we have not experienced any blackouts due to congestion between northern and southern California. In addition, it has saved the consumers of California millions of dollars in electricity costs."

Debra Bean, Procurement manager in Lakewood

"The first thing we did was to get the Department on board with us. Our delegated procurement authority in Western is $2.5 million. Contracts more than $2.5 million dollars require DOE approval. So they either have to give us approval to sign the contracts and move forward or they approve them. For Path 15, we were very successful because of our history of successful contracting with construction projects where DOE basically waived most of the approval levels. The actual construction contract was for $90 million. They had never seen a $90 million contract from us and they waived review of it. This means when they waived it, they gave the authority back to us."

Bobby Hagler, a structural engineer in Lakewood

Bobby Hagler

"The 500-kV steel pole and foundations were by far the largest I had ever designed. One of the Path 15 steel pole foundations required 210 cubic yards of concrete. They had almost every available concrete truck in Fresno and Merced counties lined up and down the right of way, waiting for a turn to pour its load into the huge foundation excavation, which contained more than 50,000 pounds of steel reinforcement.

"The design features for this line [required] bigger cranes and heavy equipment to erect the structures and drill the foundations.

"One funny thing I heard was that every night when the construction crews would shut down, they would line up their cranes, caterpillars and heavy equipment, which would still be hot from the day due to full-time operation and the high temperatures. After the sun went down, the ground squirrels and lizards would climb up inside and onto the tracks and engine compartments of the equipment to stay warm and safe. Every morning the crews would start up their engines and let them run for awhile to allow time for all the critters to escape."

Post 2004 operations

Beginning in the 1960s, Central Valley Project's generation and transmission system was embedded with Pacific Gas and Electric Company under one contract. Western banked excess energy with PG&E during good water years and PG&E provided energy back during drought at a favorable cost. It was a great deal for Western, customers and PG&E. But with California's restructuring, PG&E said it would terminate the contract. Developing successor arrangements was one of Sierra Nevada's biggest challenges, and ultimately resulted in a new Post 2004 Marketing Plan, operations plan and a sub-control area under the Sacramento Municipal Utility District.

Tom Boyko, then the Power Marketing manager in Folsom

"We spent much of the summer and fall of 2004 going back to DC every other week negotiating with PG&E and all kinds of interested parties—there were probably 40 to 50 people at the table at this FERC technical conference—on various successor transmission and distribution agreements. We didn't know until late October/early November 2004 if we were going to have transmission for our customers and what those contracts were going to look like, putting tremendous pressure on SN staff to accommodate last-minute changes as part of the new operating paradigm that went live Jan. 1, 2005.

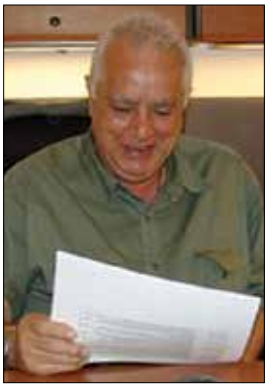
"It ended up working out quite well—we took a lot of assumptions and set up the systems around those assumptions and most of them turned out to be accurate. There were a few customers that right up to the end, even up until December, we didn't know how they would be served.

"Our people worked weekends and late every day. It was a tremendous job bringing everything together. We put 11 new software systems up at the same time and completely changed how we do business. We set up a 24/7, real-time merchant desk at the same time, along with a pre-schedule desk—a total change of our resources function here. A lot of daily functions have to happen now that didn't happen in the previous world. We had to move a lot of people around from function to function. People who used to be in Contracts are now in the Merchant function, buying and selling power or doing settlements.

"Fortunately, through the hard work and dedication of all of those involved, we were able to successfully implement the agreements to enable a successful transition from the old Contract 2948A world to the new Post '04 world.

"Since we became a merchant on Jan. 1, 2005, we've had to do a complete separation of the [merchant operations] functions. In a way it was good; you start right away standing on your own feet. But it was a lot of work, a lot of change. It was a really trying time."

Morteza Sabet, Transmission System Planning manager in Folsom



Morteza Sabet looks over transmission planning documents.

"We had to grow up really fast. Under Contract 2984A with PG&E, the energy settlement was done on a monthly basis after the fact because PG&E dispatched the Federal system and theirs as one system. All of a sudden, we had to do the work on a daily and hourly basis. A lot of new people were hired and trained to establish the on line energy accounting and after-the-fact accounting to the tune of about $20 million. I think we had our share of hiccups, but we were able to debug them and move on.

"There were times when you think, 'This is all insane, it may not work.' But when the challenge is there, people step up and rally to the challenge. It was a huge change for this region."

Project management policy

In May 2001, senior managers committed to applying project management principles and methods across Western. They chartered a Project Management Integration Team to ensure project management would result in timely and cost-effective completion of projects across Western.

Paulette Kaptain, a project manager in Lakewood

Paulette Kaptain

"The Western organizations that designed and constructed transmission facilities used project management principles since Western began. Our project management guidelines from 1998 still applied to Western, but DOE required strengthening them since Congress criticized DOE projects [for going] over budget and past the scheduled time. Western did not have the same issues as DOE's multi-billion dollar projects.

"We strengthened our policy in 2002 by making minimum requirements for projects more than $1 million in estimated cost, formalizing project management processes and creating standard project tools and templates.

"In the six years since the policy was implemented, Western has demonstrated that projects are managed well and meet the customer needs while being on time. Managers see it as part of the business 'tool kit.' Successes occur when non-traditional and typically smaller projects, such as those in power marketing and operations, use project management processes to plan, do the work and close the project."

Mike Cowan, Technical Services manager in Lakewood

"Being the project manager of project management was a lot of fun, really. Mike Hacskaylo as Administrator was determined to make a serious commitment that we would improve project management. He was very direct with our group, telling us what he expected to see in five years in how we manage our projects.

"It's changed us obviously in a good way because we more consistently deliver on our projects. The project management business practice is contributing to an increase in the productivity and effectiveness of the organization. Path 15 was an excellent example of a high-profile project where Western had a very public reputation. We showed that we can deliver on projects on time and on budget to our customers' satisfaction. I think those successes increase the credibility that we have with our customers and in the industry."

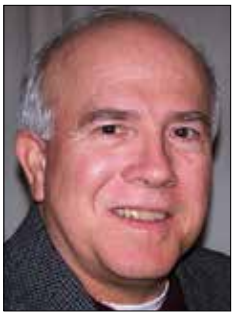
RTO formations

In the early part of this decade, the fervor over Regional Transmission Organizations was in high swing as the Federal Energy Regulatory Commission envisioned the formation of five independent regional transmission operators for the entire U.S. transmission system. Transmission-owning utilities regulated by FERC have been encouraged to turn over operational control to these RTOs. Western kept a close watch on RTO formation efforts and participated in discussions, but maintained that we would join an RTO in our service territory only if consistent with our statutory obligations, if the benefits outweighed costs and after environmental reviews and a public process were completed.

Bob Riehl, Power Marketing manager in Billings

"I think it's not going to be a lot different than some of the other things in the past. It was first of all purported

to be the grand savior idea for all of the country. What you're seeing is that RTOs were developed on each of the coasts and were fairly representative of what already existed there. Now the middle part of the country is more patchwork, and even the less populated western portion of the country is more patchwork and RTOs have not taken hold there.


Bob Riehl

"I think history is going to have some good and bad to explain for RTOs. I mean, we still had blackouts when we had an RTO. They will probably be better controlled as we go into the future."

> **"I'm not sure anyone could have envisioned RTO formation. If anyone had said, we're going to tear up PG&E and Southern California Edison and form a new conglomeration, people would scoff and say, 'No way.' But once deregulation started and ISOs and RTOs started happening, people started seeing the future."**
>
> **Tim Meeks, Western's administrator in Lakewood**

Sam Miller, then a general engineer in Billings

"FERC's deregulation efforts mandated expectations that still ripple through the lives of transmission planners with the concept of an independent system operator. The Midwest Independent System Operator is a product of the new world we live in and exists on our eastern doorstep."

Ron Moulton, Power Systems Operations manager in Phoenix

"We're entrusted with managing these Federal assets for delivering Federal hydropower, and there aren't a lot of incentives for us to take a lot of risks. So it makes sense for Western to play a little more cautious role in these kinds of efforts. You don't want to be stubborn, unaccommodating or nonparticipatory, but be cautions and understanding of the implications because it's just not in our best interests to take risks if there is not an upside."

Wind studies, interconnection

In 2004, Western received $750,000 from Congress to perform the Dakotas Wind Transmission Study to analyze how the addition of 500 MW of new wind generation would affect the transmission system in North and South Dakota. It built upon the Montana Dakotas Regional Transmission Study, authorized by Congress in 2002. These studies are helping Western and the industry determine how to integrate more wind into the grid, which is a priority as the nation focuses more closely on renewable energy. From 2003 to 2007, Western also made changes to transmission services and added a new wind simulator to the EPTC to support wind development.

Sam Miller, then Dakotas Wind Study project manager in Billings


Sam Miller

"These studies were on the forefront of the national energy debate involving transmission issues that transmission planners have been challenged to understand for many years—how to build the transmission system, yet not overbuild, in a cost-effective manner given firm and non-firm transmission system usage. The transmission system planners are trying to hit a moving target with the dynamic changes involving the transmission system.

"Transmission has been overlooked in meeting the energy needs of our nation. Generation is the favorite son, getting to stand in the sunlight, while transmission stands in generation's shadow.

"The historic significance of these studies will demonstrate that they added momentum to the rolling ball of

need to overcome constraint issues with the transmission system. We learned that nonfirm transmission is available most of the time in the Dakotas, but confirmed minimal firm capacity is available. The wind development industry keyed into the study results, and the studies have been a source of many conversations with political leaders, wind developers, renewable energy advocates and the utilities in the Upper Great Plains Region."

Lynn Richardson, Settlements team lead in Loveland


Lynn Richardson

"The issues that surround wind energy development are complex. Wind turbine technology has made great strides since the nation's first large-scale wind farm was erected on the hills surrounding California's Altamont Pass in the 1980s. Today, wind generation still has significant obstacles to overcome, especially when it comes to integrating it into existing power systems.

"In spite of the obvious benefits, the integration of wind generation into the power grid raises many issues including transmission availability, ancillary services provision, unit commitment issues and uncertain output (non-dispatchable resource).

"In May 2003, I was fortunate to serve on a Rocky Mountain Region team that proactively tackled the tough questions about wind integration, especially as it concerned Regulation and Frequency Response Service. RMR felt compelled to address this issue because we had about 2,500 MWs of intermittent renewable generation in the queue for our balancing authority—the Western Area Colorado Missouri Balancing Authority.

"In June 2006, RMR implemented a Regulation Service rate that addresses the impacts of intermittent renewable resources on the WACM BA, and fairly assigns the costs of such service.

"The issue of the United States' need to reduce its reliance on foreign energy sources is such a prevalent news item these days, and intermittent renewable energy sources (wind, solar, and others) do offer a piece of the solution. What is sometimes overlooked is that the solutions have a price. There is the obvious cost of the increased Regulation Service and the expense involved in the construction of transmission that might be required.

"One of the regional challenges is that the peak energy demand in the West has changed from winter-peaking to summer-peaking, and wind is not known for high output during the summer.

"The basic dilemma for intermittent renewable resources seems to be the word 'intermittent.' You cannot serve firm load with a non-firm resource. My hope is that more effort will be expended in the research and development for these new energy sources, so that the challenges of interconnection can be mitigated in the future."

Randy Manion, Renewable Resource Program manager in Lakewood


Randy Manion

"Public power providers are just beginning to construct their own wind facilities. To expose utility dispatchers and others to wind generation impacts to a transmission system, we added a wind power generation simulator to our Electric Power Training Center in 2006. The simulator is designed after a real 50 MW utility scale wind farm in Minnesota.

"At the EPTC, we also host Wind Interconnection Workshops to give participants an overview of wind energy. Our goal is to educate consumer-owned utilities across the United States about wind energy technologies, including the opportunities and challenges associated with the technology. Collectively, our target audience includes about 900 electric cooperatives and 2,000 public power utilities.

"It doesn't take much effort to figure out that Western's EPTC, plus wind simulator and wind interconnection workshops, equal success. The EPTC is a first-class training facility interested in supporting wind integration training for our firm power customers and others; they also represent who we are as an organization.

"When Western hosts a renewable workshop, conference or meeting at one of our own facilities, or facilitates a purchase of renewable energy, it provides our customers, the public and the renewable industry with a new impression of Western—one that demonstrates we are a helpful, professional and courteous Federal agency with real people wanting to do the right thing."

Looking ahead

TO THE FUTURE

In the decades to come, Western will likely face an endless stream of new industry regulations, reliability standards and legislation that directly impact our day-to-day operations. The need for upgrades to our bulk interconnected grid will keep the agency busy, as will opportunities to promote renewable energy use in our service area. Western's mission, including the products and services we provide, may change in the next 30 years, but employees' commitment to customers and reliability will ensure the organization's success well into the future.

Doug Hellekson, Power Contracts and Energy Services manager in Billings


Doug Hellekson

"I began my career with Western over 32 years ago as a fresh college graduate ready to begin in the 'real world' and ready to make some 'real money.' I had no idea that the electric utility journey I was about to embark on was going to be as interesting and dynamic as it has been.

"Reflecting back, I think it was quite a feat to put together in 1977 a brand new organization under the newly created Department of Energy. While I was busy working at my new found engineering career, there were a great set of visionary folks creating my future.

"I need to say thank you to those who were at the helm because they created a model and culture that is the envy of many and provided me many opportunities and security.

"There hasn't been anything in the past we haven't figured a way to overcome. So looking ahead, the only thing in the future could be something which we have little control over: Global warming, climate change and drought are words that may fit that category and give us new or continued challenges in the future."

Leslie Kerr, deputy assistant administrator for Washington Liaison in Washington D.C.

"During my 15 years with Western, I've had the privilege of working on some of the issues that have changed the way we do business. When I started working in Western's Upper Great Plains Region [then the Billings Area Office], the region did not have Native American customers largely due to the requirement that customers have utility status. I, and a lot of other regional and CSO staff, worked with the Tribes in our region, as well as the existing firm power customers, to put power allocations in place for these new firm power customers. Not long after that, I worked on implementing open access transmission and ancillary service rates in the Upper Great Plains Region.


Leslie Kerr

"I think keeping up with FERC and industry changes associated with open access will continue to be a challenge for Western for years to come. The next new challenge for Western, and for the utility business and country, is climate change. Given that Western's transmission system covers some of the highest potential areas for wind energy development in the United States it is likely that Western will be asked to play a significant role in getting this energy to market."

Claire Douthit, an attorney-advisor in Lakewood

"The states are driving the need to develop renewable energy with their renewable portfolio standards. The current estimates indicate that wind energy will be one of the sources to meet the renewable standards. Many areas in the 15-state region Western serves are excellent for wind development, and, therefore, Western will be seeing increasing requests to integrate wind into our transmission system. That's one area where I see a lot of growth.

"I also think Western, with our more than 17,000 miles of transmission lines, will continue to be a major player in the transmission industry in the West. Also, Western's past experience and success in transmission construction prepares us well to play a significant role in future development."


Claire Douthit

Paul Wermerson, a power operations specialist in Watertown

"Our role in this business of control area operations will get larger and larger. From our standpoint on the Transmission desk, we have already received requests to take over dispatching duties for other utilities. It adds more workload and responsibilities for us.


Paul Wermerson

"I still see Western's role being very important in the Midwest. I see us having a more difficult time scheduling equipment out of service. MISO [Midwest System Operator] is growing, and the demands on the electrical system are increasing rapidly. In our region, the demand for electricity to serve oil growth is phenomenal. We have an enormous number of projects in the planning stages to facilitate this growth.

"The industry is ever-changing."

Steve Richardson, a public utilities specialist in Folsom

"When I started with the Sierra Nevada Region in 1997, the California Independent System Operator was not in existence and the region was still under its integration contract 2948A with PG&E, which dominated how we did business. Contract 2948A was terminated on Jan. 1, 2005.


Steve Richardson

"I never imagined that this electrical utility industry would be so drastically different today then when I first started at Western. However, my experience at Western has been that its extremely innovative and talented workforce will carry us through these changes and will prepare us for the next 30 years, too."

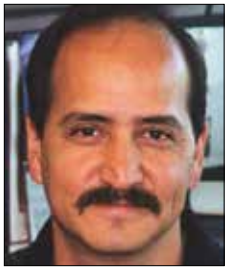
Penny Casey, Energy Management and Marketing Office manager in Phoenix

"Change—this word represents the past, present and future of Western and the electrical industry. I continue to be amazed at how consistently Western rises to the challenges it faces on a daily basis. A good example are the continuous budget cuts that Western experiences and how innovative Western staff members have been with working with the customers to create advance funding, energy banking and prepayment opportunities.

"I see Western's future becoming more independent of appropriations and being in control of their finances through continuous customer service and commitment to providing quality services at cost."

John Quintana, an electrical engineer in Lakewood

"When I started with Western, I never imagined that 16 years later the same major issues (safety, reliability, and cost containment) remain to be the priority of Western's Maintenance organization. Grounding and fall protection will always be a safety issue in our industry, as will reliability and cost containment. The major change? We have become and will continue to become more accountable in the form of measurable and tangible results with regard to the three issues above."


John Quintana

Rodney Bailey, a public utilities specialist in Salt Lake City

"When I started with Western, I never imagined that I would be helping repay what my father helped to build. In his 39-year career (starting in 1956) with the Bureau of Reclamation, my father worked on the construction of many of the dams, tunnels and canals that make up the Central Utah Project, which is part of the Colorado River Storage Project.


Rodney Bailey

"As a public utilities specialist in Western's Colorado River Storage Project Management Center, I am responsible for rate making and repayment. The final repayment required for the irrigation unit he worked on is the same year I am eligible for retirement. I hope to be with Western and see this applied. That will be nearly 70 years of our family involvement in the CRSP."

Darla Helms, a public utilities specialist in Billings

"What do I think is in store for Western's future? Change!

"There will continue to be changes in the area of transmission. I think there will be technical innovations in transmission that will change how electricity is transmitted. I also think that alternative sources of energy will continue to be developed such that they play a major role in the electric industry.

"I think there will be changes in how offices work. Western will look for ways to change the office setting. More people will telecommute. Maybe Western will have two shifts so that the amount of desk space and office equipment can be reduced by half. Many of Western's employees are reaching retirement age, and their leaving will cause changes within Western. The generation of employees just now entering the work force have a different value of family and work than those who are leaving. Western will have to find ways to meet this new generation's priorities.

"When I started with Western, I never imagined that I would be anything other than an electrical engineer. But here I am working in Rates, going back to school to get my MBA!"

Ken Furlow, a systems analyst in Lakewood


Ken Furlow

"When I started with Western's data processing office in the late 1970s, I never imagined the changes that personal computers and the Internet would bring to the workplace.

"We were concerned with more mundane issues in those days. For starters, Western had no computers. We relied on the Bureau of Reclamation for back office systems support while we were working on purchasing and installing a distributed network of Prime minicomputers.

"When the first computers arrived, we installed them on the second floor of the office complex we shared with the Denver Area Office in Lakewood. A few months later, the building manager informed us that the second floor was sinking in the computer room area. Fortunately for the employees located below the computer room, we moved to Denver West with the rest of the Headquarters staff a few months later.

"What do the next 30 years hold for computing in Western? Frankly, I don't have a clue other than to make the safe prediction that our reliance on the Internet and networked systems/databases will increase. Other than that, I'll heed the sage advice of that great philosopher Yogi Berra who observed, "It's tough to make predictions, especially about the future."

> **"We may have many opportunities in the decades to come to alleviate transmission congestion and promote renewables through our transmission and marketing services."**
>
> **Tim Meeks**

Tim Meeks, Western's administrator in Lakewood


Tim Meeks

"Western is a great and vibrant agency with important roles to play. What kept me as a student in 1982 and what keeps me here still today is that we continue to adapt and grow. There has never been a time like this to position ourselves for the future to meet tomorrow's energy challenges.

"Two major challenges we face are the need for transmission in the West and the integration of renewables onto the grid. I believe we could play a pivotal role in meeting these needs. We may have many opportunities in the decades to come to alleviate transmission congestion and promote renewables through our transmission and marketing services. At the same time, we must continue to deliver power to our customers, at the lowest possible costs consistent with sound business principles.

"With our products—hydroelectric power, transmission and related services—people can take us or leave us; there are other options. With other Federal agencies, you can't necessarily go anywhere else. We must be responsive to the changes in our industry and our customer needs or we will be out of business.

"We are a worthwhile agency with a great future. Customer groups have reaffirmed to me their appreciation for Western's valuable resources and the value of our partnerships. Because of their support, we continue to thrive 30 years later."

Acknowledgements

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Carolyn Hinkley
Editor


Western
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